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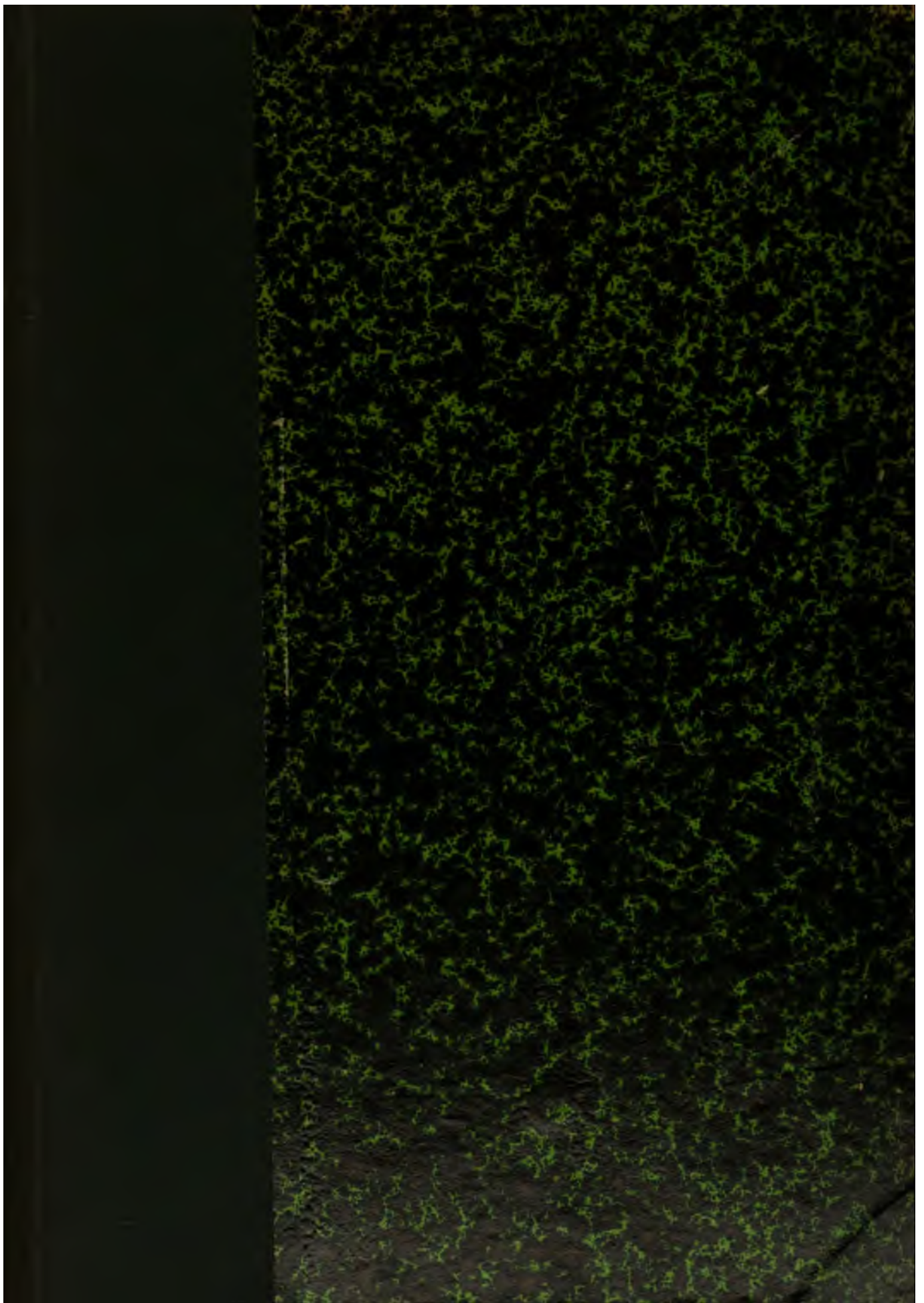
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E. R. AXTELL, M.D., EDITOR AND PUBLISHER.

**"IN 41 CONSECUTIVE
CASES OF
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ARSENAURO
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POSITIVE SPECIFIC"**

"THIS IS UNDOUBTEDLY DUE TO ITS
NUTRITIVE EFFECT
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"SATURATE THE PATIENT"
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His chamber in the silent halls of death,
Thou go not like the quarry slave at night,
Scourged to his dungeon; but sustained and soothed
By an unfaltering trust, approach thy grave
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams."

—BRYANT.



DR. EDWIN RODARMEEL AXTELL.

THE COLORADO MEDICAL JOURNAL.

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A Journal of Science, of News and of Medical Lore.

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No. 1.

Diuretics in Renal Dropsy: Their Indications and Uses.

By E. R. AXTELL, M. D.

A striking symptom of that peculiar complex of symptoms which we call Bright's disease is dropsy. It is a symptom that the patient usually notices and calls attention to. It is by no means present in every case of renal disease. It is usually present in acute nephritis, but we have all seen cases where it was very slight or absent. When acute nephritis complicates pneumonia, typhoid fever or diphtheria, it is usually absent.

In the form of subacute nephritis, and in that form where the kidney is large and white, dropsy is very common, being absent in only eight or ten per cent.

In the interstitial form dropsy is much less common. In the early stages of the form it is generally absent, in fact almost never occurs, but later on it may appear—and this usually from cardiac failure.

Dropsy is simply a name for an accumulation of watery fluid in the lymph spaces of the subcutaneous cellular tissue and in the serous cavities of the body.

This watery fluid is lymph and is derived from the capillaries. Under normal circumstances it is poured out into these spaces, but as fast as it is poured out it is taken up by the venous and lymphatic radicles.

There are two essential factors necessary for the production of dropsy, and they do not seem to have an absolute relation to the condition of the kidneys. First, there must be an increase in the outflow of fluid; or, second, there must exist a failure on the part of the veins and lymphatics to take up the effused fluid.

It is not my province to enter into the physiological facts and experiments which have been made in this line. I think our present knowledge of the pathology of dropsy can be embraced in the following summary, which is modified from Saundby:

First—Dropsy is an accumulation of lymph or watery fluid in the lymph spaces of the body and serous sacs as a consequence of (a) defective pumping arrangements, on account of which fluid accumulates; (b) changes in the blood and capillaries by which the outflow of fluid is increased.

Second—Dropsy is present in most cases of acute and subacute nephritis.

It is present in about ninety per cent. of cases of large white kidney.

It is present in only about ten per cent. of cases of uncomplicated contracted kidney. In the late stages of this disease it is more frequent, being present in twenty-five per cent.

Third—In uncomplicated contracting kidney dropsy is due to heart failure; but in acute nephritis and its sequelæ it is due to more obscure causes in which a watery state of the blood is accompanied by increased permeability of the capillaries, caused possibly by the presence of an acid or other toxic substance in the blood.

This introduction is to serve for the very limited field which I have taken for this paper. In dropsy we do not confine ourselves to diuretics—medicines which increase the secretion of the urine—we use diaphoretics and hydragogue cathartics; but I am not to consider in this paper the treatment of dropsy, but simply the use of diuretics in this condition.

We all use in renal dropsy, at some time or another, diuretics. I believe much harm may come in their use unless they are judiciously chosen.

We have diuretics divided into two classes, the direct and the indirect.

To the first class belong all medicines which produce an increase of diuresis by influencing the kidneys directly.

To the second class belong all medicines which produce an increase of diuresis by augmenting the general blood pressure. This means, of course, their action on the heart, whose energy is increased. Diuretics of this class do not act on the kidneys. They are incapable of augmenting the flow of urine when they fail to increase the force of the heart's action. When given to a healthy man or woman they do not markedly augment the quantity of the urine, simply because the blood pressure is generally at its maximum height. Given, however, in a case where there is insufficient heart action and a small flow of urine, they often in a short time produce copious diuresis.

We could consider in elaborate detail the question of urinary secretion, but it is not necessary in an elementary paper, as this professes to be.

We know a few fundamental facts as regards the influence of diuretics upon the kidneys. Any medicine which increases the flow of urine by a direct action on the kidneys causes a more or less active hyperaemia, with increased activity on the part of the renal epithelium.

Some of the direct diuretics, when given in large doses, so augment the hyperaemia as to render the urine bloody and albuminous.

If we seek to understand the frequent occurrence of dropsy in renal diseases, we have then these solutions: The main function of the kidney is to excrete water from the body; if, because of disease, this task can be no longer fulfilled, or only in part, it accumulates elsewhere and dropsy results. To this we have added Cohnheim's theory—that there is an increased permeability to the blood vessels.

Clinical experience seems in general to agree with these solutions. Oedema in renal disease seldom appears until the daily amount of urine has been below the normal for some time. In those cases of renal disease where a large amount of urine is passed, or where even the urine is normal in amount, oedema is usually wholly absent.

It is the rule that where we have dropsy, and where there follows an increase in the amount of urine, the dropsy diminishes, and, conversely, little urine means more dropsy.

We practically have direct diuretics divided into two classes, the saline diuretics and the stimulant diuretics. The salines take their name from the fact that they change the reaction of

the urine, rendering it less acid or even alkaline; while the irritant or stimulant diuretics, when administered in excessive doses, diminish the quantity of urine and produce symptoms which show renal irritation or inflammation.

The saline diuretics are those mostly used and recommended in the dropsy of acute nephritis.

The acetate of potassium, the citrate of potassium, the bitartrate of potassium, or these salts of sodium, lithium, calcium or magnesium, are all used. It is recognized now that the salts of potassium cause a more decided diuresis than the other salts mentioned, and they are preferred when an increase in the amount of urine is demanded. Of this salt the acetate, citrate and bitartrate seem to possess equal diuretic power. This is probably due to the fact that before reaching the kidney they are all converted into the carbonate and eliminated as such.

This salt in its elimination excites the renal epithelium to increase activity. An active hyperaemia results and there is an increased flow of watery urine.

In renal dropsy the saline diuretics are frequently used, and apparently without discretion. They may be useful, but they may be very harmful. In the dropsy of an acute nephritis saline diuretics do harm as long as the inflammation of the kidney is the cause of the diminished secretion of the urine. An inflamed kidney must not have its epithelium stimulated to increased activity; an artificial hyperaemia must not be added to acute congestion. So harmful may saline diuretics be in acute nephritis that they may hasten the appearance of uraemic symptoms.

I contend that all diuretics should be withheld in acute nephritis until the acute inflammation has subsided. This

means that a period of one or two weeks ought to elapse before they are given.

When the inflammation has subsided and there exists a scanty flow of urine, due to the presence of tube-casts and masses of blood in the uriniferous tubules, then these saline diuretics are useful by hastening the removal of these impediments. The proposition is this: The salines may do a little harm, but the collections of foreign material in the uriniferous tubules will do more harm if they are not removed. On the passing of more urine, the dropsy often goes away slowly and steadily.

In the dropsy of chronic renal disease I have never seen the saline diuretics do much good. They may increase diuresis, but they do not lessen dropsy. Certainly in any case of chronic renal dropsy one would not be justified in using the saline diuretics for any length of time. If the damaged kidney cannot secrete water, it cannot eliminate these medicines. In this way we could do harm.

The stimulant diuretics are frequently recommended in the most careless manner for renal dropsy. Take up almost any text book and the list of diuretics to use is very great, and this without any apparent reference to whether harm can or cannot result from their use.

It is true that in many cases of dropsy we get to a place where the question is "What is next?", and where one sees the great need of a drug that will make remaining kidney tissue do its work actively and help out. It is in such cases that we are privileged to use renal diuretics, but not until diaphoretics and hydragogue cathartics have been tried. That is the fundamental consideration.

I mention here the usual drugs

recommended for this condition—it is my intention to consider each briefly: scoparius, squill, caffeine, pilocarpine, digitalis, diuretin, sweet spirits of nitre and calomel.

Let us take up scoparius. This is a stimulant or irritant diuretic and occupies a high place among the active diuretics of English physicians. It is recommended for renal dropsy in several American text books.

It can be used late in any renal dropsy. It decidedly augments the urinary secretion and sometimes the action of the bowels. It is employed in the form of a decoction, containing one part in twenty. Of this decoction the dose for an adult is two ounces every three to six hours. It is frequently combined with squill.

Scilla. Squill is generally conceded to be contra-indicated in acute nephritis and all forms of Bright's disease. It is, however, a diuretic of some power, and is classed among the indirect diuretics, it having been shown that its diuretic action takes place in consequence of a modification of the heart's action. Late investigations have shown that toxic doses produce in animals no marked changes in the kidneys. Although squill is such a diuretic, yet when it comes to removing renal dropsy it seems to have but little influence. I cannot, from personal experience, recommend its use in renal dropsy.

Caffeine citrate in renal dropsy was first recommended by Professor Gubler, who asserted that it was a powerful diuretic. His claim has been confirmed clinically many times. It is not to be used in acute Bright's, but can be used in chronic Bright's in doses of three grains every three to five hours. It apparently has a direct diuretic influence, as well as influencing the heart. Caffeine when injected into the blood af-

fects blood pressure but little. It causes dilatation of the renal vessels after a passing constriction and an increase in the flow of urine after a temporary diminution. It is often uncertain in its action. It will work nicely one time, and be of no service at another. It is worth a trial when other things have failed.

Pilocarpine hydrochlorate is nowise classed as a diuretic, but some recent experiments of H. C. Wood (?) indicate that it stimulates the kidneys. He says: "There is some clinical experience in favor of the plan of giving pilocarpine in doses of one-tenth of a grain three times a day, so as to avoid any violent action upon the skin and get a decided increase of the urine."

Digitalis has, in the opinion of H. C. Wood, direct diuretic properties. He says: "The diuresis of digitalis is not simply a result of its action on the circulation, since it will some times appear before the circulation is sensibly affected. At the same time it is very evident that in disease the good effect of digitalis upon the renal organs is often in large measure due to its action upon the heart, but it is of value as a direct diuretic in renal dropsy both in the subacute and the chronic form, and while it frequently fails in these varieties of Bright's disease, yet it should always be tried."

It may be given in three forms—fluid extract, tincture or infusion. The dose of the fluid extract is one, two or three minims every two or three hours, according to the urgency of the case or to the readiness with which the patient responds to the drug. This is always a variable factor. The tincture can be given in from ten to thirty-minim doses every two or three hours.

The officinal infusion, in doses of from one to three teaspoonfuls, is per-

haps the best and most efficient form in which the drug can be administered, but it is at the same time the most trying to the stomach. Indeed, this drug in any form is apt to nauseate, and where we have this symptom present from a toxæmia we are often deprived of the use of this valuable drug.

Digitalin has not in my hands given me the results that I get with the infusion.

Diuretin was the name given by Dr. Christian Gram, of Copenhagen, to the salicylate of theobromine and sodium which he introduced as a substitute for caffeine. Extensive clinical experiments with the drug showed its diuretic action. It is a white powder, with a slightly bitter and disagreeable taste, and is very soluble. Its solution is very unstable and it rapidly decomposes. This drug exerts its diuretic properties by a direct action on the secreting tissue of the kidneys. It acts promptly and energetically. Its effect is continued for twenty-four or thirty hours after the cessation of the drug. It increases both the solids and fluids of the urine.

In all forms of dropsy due to renal disease, where a diuretic is demanded, diuretin can be used. There is certainly but little irritation to the renal epithelium, and very few bad results have been reported from its use. It may occasionally produce slight intestinal irritation and it has been known to cause slight delirium, but it is probable that in these cases the dosage was unnecessarily large. Its early dosage was larger than it is at present. Sixty to ninety grains daily was recommended. The best method of giving the drug is in ten to twelve-grain doses, three times a day at first. Increase to thirty-grain doses if necessary. It is to be given in water with some aromatic essence, like

essence of peppermint, to disguise its bitter taste, and always when the acidity of the stomach is at a minimum—three or four hours after meals. When it fails in a case of renal dropsy, a combination of diuretin and digitalis should be tried before it is discarded.

I have used diuretin many times in renal dropsy with scanty urine, and I have seen urine increase from twenty ounces in twenty-four hours up to one hundred and forty-six ounces in the subsequent twenty-four hours.

I have never noticed any change in the circulation from its use, and although I employed it for a long time in two cases of renal dropsy, yet it did not seem to increase the arterial pressure at any time.

Diuretin has been used with good results in the renal dropsies of children, and R. Demme says that in the dropsy of scarlatinous nephritis, after the first stage of the disease has passed, diuretin will remove the dropsy more rapidly than any other diuretic.

The dose for children from two to five years old was three to fifteen grains daily; from six to ten years old, fifteen to forty-five grains daily. Knoll's diuretin is probably to-day the most reliable drug on the market. Some poor results no doubt are due to the product used. Of course, where renal epithelium has undergone too extensive degeneration, the drug may fail.

Spiritus atheris nitrosi has a reputation as a diuretic in renal dropsy, but it is ill founded, for it is not sufficiently powerful, even in large doses, to make it worthy of reliance.

Calomel long ago was observed to have a diuretic power, but this seems to have been forgotten during the past twenty years. Its consideration as a diuretic is most interesting, but a long line of clinical observations show that

in renal dropsy it has almost no power.

In cardiac dropsy calomel produces marked diuresis and helps greatly, but in renal dropsy it acts very feebly or not at all.

There have been several new remedies proposed lately for renal dropsy, of which fuchsin and apocynum cannabinum are the most promising, but I have had no experience with either drug and I cannot say anything as to their value.

There are a great many remedies which stimulate the kidneys and have in a limited way a diuretic action, but most of them are too irritant to be used in diseased kidneys and are too feeble in action to be of any value. We can dismiss most of them by putting them in this list: Pipsissewa, copaiba, cubeba, buchu, uva ursi, pareira, taraxacum and cantharis, juniperus and terebintha.

Chronic Pneumonia.*

By E. R. AXTELL, M. D.

Much confusion exists in the use of the term chronic pneumonia. One authority says it means a stage of other pulmonary disorders; another, that it means a tubercular fibroid change; another, that it is a result of an extension of a similar process from the pleura; another, that it is essentially a dust disease.

By chronic pneumonia I mean "interstitial pneumonia," from whatever cause.

It is never a primary affair, but always secondary to croupous or catarrhal pneumonia, from failure of resolution.

It also results from hemorrhagic infarctions, from abscess of the lung, tumors, follows pleurisy and pleuritic effusion, tubercular deposits, or anything irritating the lung tissue.

Chronic bronchitis may be the cause of the disorder, especially that form which is contracted by coal miners and workers in various metals which give rise to irritating dust and powders.

I do not take it that chronic pneumonia necessarily means pneumonokoniosis—the deposit of new formed fibrous tissue distributed in greater or less abundance along the bronchi in the chronic bronchitis resulting from the continuous inhalation of irritating particles in certain trades. We know to-day that this disease is essentially a severe chronic bronchitis, due to a particular cause, and ending in bronchiectasis, emphysema, and fibrous or chronic pneumonia.

The morbid process in chronic pneumonia consists essentially in a gradual substitution, to a greater or less extent, of connective tissue for the normal lung. It is a fibroid process. This may have its starting point in the tissue about the bronchi, the blood vessels, the interlobular septa, the alveolar walls, or the pleura.

It may be either local or diffuse.

Local fibroid changes are common. Hardly a post mortem occurs without local areas being found. It is a constant accompaniment of tubercle, tu-

*Read before the Colorado State Medical Society, June, 1899.

mors, hydatids, abscess, emphysema, and gumma.

Diffuse fibroid change in a lung or in both lungs may involve a whole lobe, or a whole lung, or a lobe in each lung, although the usual plan is for the process to be confined to one lung. If it follows as a sequence of acute fibrous pneumonia—which is rare—a gradual process of organization goes on in the fibrinous plugs within the air cells. The alveolar walls become thickened and the newly formed connective tissues in the alveoli extend to meet it. But few cases have been carefully studied.

Broncho pneumonia, acute or sub-acute, is a big factor in the production of chronic pneumonia. The fibrosis usually starts in and about the bronchi. The alveolar walls become thickened, and in the catarrhal plugs in the air vesicles there is a production of fibrous tissue. An entire lobe or a whole lung may be involved, and the normal lung substituted by the connective tissue.

Interstitial pneumonia from invasion from the pleura occurs occasionally. We find in such cases a greatly thickened pleura and dense strands of fibrous tissue passing from it into the lung substance.

Chronic interstitial pneumonia due to inhalation of dust I have already referred to.

Chronic pneumonia is of necessity a chronic disease; it may last for years, and the patient may not be very ill. The patient first presents the symptoms of the original causative factor. At and from the time that we ought to expect a broncho-pneumonia to terminate in resolution, a chronic cough remains and a little shortness of breath persists. The cough is paroxysmal, and the expectoration copious and of muco-purulent or sero-purulent character. Cough

and expectoration vary, and the latter is sometimes fetid. The dyspnoea persists. The patient has the appearance of delicate health and has fever. Hemorrhage is by no means infrequent—due to a dilated blood vessel.

The physical signs show the affected side immobile, retracted and shrunken. The contrast with the sound side is marked. When the left lung is the seat of the trouble, the heart's impulse is often in the second, third and fourth interspaces. The percussion note may be absolutely flat, yet changes in the bronchi may produce other conditions, such as high pitched tympany, or even amphoric resonance. On auscultation the breathing sounds may be feeble, and range from that to broncho-vesicular or bronchial, or even amphoric respiration. There is often sharp accentuation of the second pulmonic sound, due to forcible effort of the right heart to push blood through the contracted lung.

Diagnosis: Given a case with a history of pleurisy or catarrhal pneumonia, followed by a chronic cough and expectoration, with temperature, but no bacilli of tubercle in the sputum, and the diagnosis is easily made.

With almost no exception the authorities class the fibroid pneumonia of tubercular disease under the head of fibroid phthisis. The only feature of difference, either clinically or physically in some cases, is the presence of the bacillus of tubercle and the history. I have seen a great number of cases where every indication pointed to a healed tuberculosis by a fibroid deposit at the seat of the old trouble, yet in all of these the bacilli persisted in the sputum.

A fibroid pneumonia will not get well. We can do nothing for the condition itself, unless we find in some

drug, like thiosiamine, a remover of old inflammatory cell products. The patient usually seeks relief from some intercurrent affection or for excessive cough.

Change of climate to Colorado is beneficial. Our climate dries out the excessive bronchial secretion, lessens the liability to decomposition of bronchial cavities, prevents liability of tubercular infection, and is of value until the right ventricle begins to yield, as shown by increasing dyspnoea and a cardiac murmur at the tricuspid valve.

Then these patients must be sent to a lower altitude where the climate is warm and dry, such as southern California or northern Florida. A rich, nutritious food and favorable hygienic conditions are necessary. Such patients should be kept away from tubercular cases. For fetid expectorations, inhalations or nebulized sprays of oil of eucalyptus, bichloride of mercury or carbolic acid are beneficial. Old authorities gave arsenic in small doses long continued.

AS WE KNEW HIM.

As a Student.

(The following is taken from a personal letter received from one of Dr. Axtell's professors at the Miami Medical College, Cincinnati.)

"My acquaintance with the doctor enables me to judge more fully the extent of your own loss. At the college, as a student, he was always extremely courteous, polite and attentive to his duties; respectful to his teachers and genial in his association with his fellow students. That he worked to some purpose was well attested by his securing a position as interne at the City Hospital, after passing a competitive examination to which students of other colleges were admitted on equal terms. His service in the hospital was characterized by the same careful and conscientious attention to the patients entrusted to his charge. Painstaking, kind, and thoroughly in earnest, it was

but natural that he should leave the institution, with the full approval of the staff, as to the work he had done. It is quite characteristic of his later life that one of his colleagues in the city of Denver should have told me, that Dr. Axtell would sooner spend a few hours at the microscope than heed the calls of patients who might then demand his services. Unfortunately, the medical profession cannot boast of too many who would thus sacrifice personal advantage to scientific ardor.

I join my regret to that of many of his friends, that a career full of promise should have thus early been brought to a close.

Very truly yours,

Joseph Eichberg."

Cincinnati, Ohio.

As Chancellor McDowell Knew Him.

It was my pleasure to be intimately associated with Dr. Axtell during nine years. Much of this time he was acting secretary of the School of Medicine, and the rest of the time actual secretary. His courtesy was unfailing; his patience and thoroughness in attending to the duties of his office were marked; his taste and sense of fitness were of a very high order. But to me, after the

personal charm of his character, the most pleasing thing was his professional enthusiasm. I never came in contact with him without feeling how sacred a thing the medical profession was to him. All this it is a pleasure to remember now.

Ever sincerely yours,

William F. McDowell.

As Secretary of the University of Denver, Medical Department.

The Medical Department of the University of Denver, in my opinion, owes more of its success to-day to Dr. Axtell than to any other one person.

He became identified with the college shortly after he began practice in Denver. At that time the future of the college was by no means bright. His first office was assistant secretary, and he also acted as assistant to the class of medicine. When Secretary Fisk was made Dean, Dr. Axtell was the immediate choice for secretary of the faculty. He was not a professor at this time, but so great was the confidence which every member of the faculty placed in his honesty and integrity that he was present at all our meetings, was a listener to the perfecting of all of our plans and entrusted with all our secrets. At this time Dr. Axtell was only a little past his majority; still there was never, as far as I know, the slightest reason for doubt in the mind of any one of the faculty in regard to his reliability or trustworthiness. He retained the office of secretary after he became a professor in the Department of Medicine. He took an intense interest in the college. He was always ready to do more work,

and gradually one thing after another was left to the secretary, until practically the policy and conduct of the school was left in his hands, until about three years ago, when the increased labor and responsibilities of a growing private and hospital practice and the amount of time required in the editing of the Colorado Medical Journal necessitated his being relieved of some of his college work. Although his duties as secretary had been considerably lessened, at the close of last session, much to the sorrow of the friends of the institution, he found it necessary to resign the position.

Dr. Axtell was professor of renal diseases at the time of his death, a position he had filled from his entrance into the faculty in a manner most acceptable to both faculty and students. The first chill he felt—the forerunner of the other symptoms of infection—was during his last lecture before the class.

His place will be hard to fill. I can only end as I began. I know of no single individual to whom the Medical Department of the University of Denver owes more for its present splendid success than Professor E. R. Axtell.

E. C. Rivers.

As a Preceptor.

It was in the earlier years of Dr. Axtell's professional career that I knew him as a preceptor, at that time a young man full of hope and an earnestness of purpose much above the average. A student himself, although even then well fitted for his work, he was always approachable; and his frank, genial disposition, coupled with his ambition and high ideal of the medical profession, won for him the universal love and esteem of his classes.

He was happiest when at work either preparing material for the use of his students, securing the latest literature for a carefully prepared lecture, or surrounded by the members of his class, verifying with the clinical work at the dispensary or bedside, the subjects he had presented in the class room.

A painstaking man, a man of detail himself, all that he asked of his

students was the same consideration in return; in this he was very exacting. A man whose heart was in his work, thoroughly sympathetic and conscious of the trials of the student, he was more the companion and teacher than the college professor.

In the pursuit of knowledge for himself and the advancement of his profession, his liberality of views permitted him to cull from every source, and no fact, no theory advanced by students or other schools of medicine but received from him due consideration.

In summing up the man as seen daily for several years of student life, and intimately known as a fellow practitioner since those days, I can only say that his generosity, genial disposition, integrity and high ideals in life appealed to the student as the true type of "a manly man."

C. E. Tennant.

As an Associate in Journalism.

Four years ago Dr. Axtell and the writer entered upon the publishing of The Colorado Medical Journal. The work in building up and maintaining it brought us together almost daily. Being thus intimately associated for so long a time, an excellent opportunity was afforded for estimating each and every phase of the man's character under all sorts of conditions and circumstances.

Upon first meeting Dr. Axtell, I formed the impression that he possessed a brilliant and disciplined intellect, more energy than any one man ought to have, was exceptionally well qualified for the duties incumbent upon a

medical practitioner, had a high regard for all things good in the earth and little tolerance for sham and pretensions. The better I became acquainted with the doctor the more certain I was that my first estimate of his character was correct.

To be in his company was to be benefitted intellectually, morally and otherwise. He was a large factor in teaching me many simple truths, and amongst others that morality is not entirely dependent upon Christianity, that philosophical anarchists, atheists, socialists, etc., are, as a rule, students and brilliant men.

From the first issue of the Journal,

it was Dr. Axtell's purpose and determination to make it clean, high grade, and worthy of the patronage of the best physicians in the "Great West." No monetary or other consideration could tempt him to waiver or hesitate in this or other matters from what he believed to be a straight-forward duty. His interest in and devotion to the Journal was not due to a commensurate expected return in dollars and cents, for that could not be, but rather to the real love of the work—that which makes the true artist in any walk of life.

Rudyard Kipling being the doctor's

favorite poet, the few stanzas here following seem particularly appropriate:

"When earth's last picture is painted and the tubes are twisted and dried,
When the oldest colors have faded and the youngest critic has died,
We shall rest, and faith we shall need it—lie down for an æon or two,
Till the Master of All Good Workmen shall put us to work anew!

And those who were good shall be happy; they shall sit in a golden chair;
They shall splash at a ten-league canvas with brushes of comet's hair;
They shall find real saints to draw from—Magdalene, Peter and Paul;
They shall work for an age at a sitting, and never be tired at all."

E. A. Sheets.

From the Colorado State Home for Dependent and Neglected Children.

Dr. E. R. Axtell was for several years a member of the medical staff of the State Home for Dependent Children at 3233 Bert street, in North Denver. The last two terms of his service were January, February and March of 1898 and 1899, the hardest months for this service as it is during these months a careful watch must be kept to guard against scarlet fever and diphtheria. The doctor carried us through a scourge of the latter disease, responding to the numerous calls cheerfully and making

the long, cold trip many times, examining dozens of little throats daily, always kind and pleasant and winning the confidence and love of all with whom he came in contact.

The children had begun to look forward to his next term of service when the news of his illness and subsequent death brought sorrow to all alike.

In the death of Dr. Axtell we feel that the institution has lost an able counselor and a true friend.

U. W. Cowan, Sup't.

As an Associate in County Hospital Work.

I knew Dr. Axtell well in his hospital work. He was above all, patient and painstaking. At the Arapahoe County Hospital he kept more complete records of his cases than any of his medical confreres. To those of us who have attempted this in a considerable hospital service the magnitude of the

task of keeping full reports is apparent. Yet, in one's earlier years at least, the value of such systematic work is inestimable. The doctor's strong leaning toward pathology, which every clinician must have as a basis for successful work, was greatly in his favor, and he followed his cases to the autopsy table

with commendable interest. He was especially interested in the diseases of children, and was successful in his practice amongst them.

His relations with his brother physicians were uniformly pleasant, and with nurses and patients he was always popular. J. N. Hall.

As a Medical Editor.

Among the quite large and increasing galaxy of Colorado medical editors that have from time to time essayed to fill this role, none stands out more prominently, more conspicuously than did the noble, manly and classical figure of Dr. E. R. Axtell.

Colorado medical journalism had its inception in 1880, when the brilliant, dashing, inventive genius of A. Wellington Adams planned and launched the Rocky Mountain Medical Review. This journal, like so many of the good things of this world, was destined to be short lived. Following this the Denver Medical Times was started, and during the same month Dr. Warn, of Denver, started a journal called the Colorado Medical Journal. The editor and the journal both died promptly after the first number was published. Then came the scholarly, earnest and indefatigable Dr. Manly with the Colorado Climatologist, a sprightly medical journal. Dr. Manly was an able and conscientious editor. When the Climatologist was no more than fairly initiated Dr. Manly died, and the work was taken up by Dr. E. R. Axtell and his associate, Dr. Sheets. The name of the publication was changed to the Colorado Medical Journal, and the work was ably carried on by Dr. Axtell until death claimed him.

Dr. Axtell was in many ways specially fitted for editorial work. He was

a careful, thorough, conscientious, hard-working student. He was a piquant and pleasing editorial writer, a master of simple, concrete diction, and a model reporter, always just, always fair. He possessed rare executive ability, and was a financier of the first order; the Colorado Medical Journal gave ample evidence of all these qualities. Dr. Axtell was dignified yet genial, sociable and approachable and always ethical, exacting and just in business, courteous and amiable in all dealings with his co-workers. Quacks and quackery found no favor with him. His ideals were high and he loved excellence for excellency's sake and not to gratify personal vanity. Intellectually he was of a superior mould—thoughtful, studious, a methodical and a practical philosopher. He was in no sense a visionary dreamer. He possessed a vein of sarcasm, but he never used this keen, two-edged instrument to vent his spleen on his foes or rivals. Ridicule he rarely indulged in, but when he did so he handled his instrument as deftly as an expert swordsman wields his sword or foil. Dr. Axtell's pen was used without fear, boldly and with courage in any and every good cause; no better, no nobler, no higher order of man in the capacity of editor ever wielded the classical quill. In memory long will his genial face smile upon us. In memory, long will the

tones of his resonant and melodious voice resound in our ears.

May the great unknown force that brought this noble specimen of manhood into this active, throbbing, lovely

world, and ruthlessly cut him off in his prime, grant peace and rest unto his ashes.

Thomas H. Hawkins,
Editor Denver Medical Times.

At the Colorado Cottage Home.

One of the many institutions of Denver that mourns the loss of Dr. Edwin R. Axtell is the Colorado Cottage Home, upon whose staff he served faithfully as attending physician for many years. This institution is a real refuge for poor unfortunates who at the most trying hour need kindly sympathy and skilled medical attendance. Hundreds have been sheltered there during the past fifteen years and nursed back to health and higher motives through the united efforts of the noble women and self-denying physicians connected therewith. And to this home our lamented

Dr. Axtell brought comfort and strength by his skill and his untiring efforts that characterized his work at all times. His exemplary life and strong and pleasing personality made his influence for good particularly felt in the above named institution. Long, long will his colleagues on this staff miss his cheery presence, his ready aid and counsel. The institution itself feels his loss most keenly and mourns the untimely death of a true benefactor.

A confrere,

Laura L. Liebhardt.

Dr. Axtell in his Relation to the Medical Library.

Dr. Axtell was one of the original members of the Colorado Medical Library Association. He heartily entered into the plans for building up a great medical library in Denver. He was one of the most considerable donors upon whom the maintenance of our impecunious organization depends. Dr. Axtell contributed to the Medical Library the major part of the publications received in exchange for the Colorado Medical

Journal. It is because of such gifts that the files of journals accessible in the Medical Library have reached the number of nearly 150, less than thirty of which are subscribed and paid for. It is not difficult to get the passive, easy-chair sympathy of our friends when they are asked to co-operate in some plan for medical progress not visibly remunerative; but there was one man who could also be relied upon to

put in his best licks of active work and that was E. R. Axtell.
without promise of personal reward,

Henry Sewall.

The Funeral Services.

The death of Dr. E. R. Axtell again forcibly illustrates the uncertainty of life. Here in the same house where two short weeks ago we were an honored guest, pleasantly entertained, we are come to pay our last tribute of respect to the memory and gaze for the last time on the silent face of him who in life we were honored in calling friend.

In life he loved nature and never tired of investigating her varied forms and phases, and in death we find him surrounded by the most beautiful in nature. Flowers, fresh and fragrant, the tribute of loving friends, hide from view the somber-hued casket where his form reposes, and we only see his face among the vari-colored flowers which furnish such a beautiful setting, illustrating his life, which was pure, bright, honest and ethical.

We erect no tablet to his memory, but the tears that coursed down the cheeks of former patients, friends and colleagues were far more eloquent in their silent simplicity than the most eloquent funeral oration, and a far greater tribute to his true worth than the costliest marble shaft erected in the city of the dead. The daily papers on the morning of the 15th announced that the funeral services would be strictly private, else a very large room would have been necessary to accommodate all who wished to pay their respects to the memory of Dr. Axtell. As it was the house was filled with patients, nurses, physicians and friends all bound together in deep

mutual sympathy over the loss they had sustained.

Of the funeral services we can but say: they were simple, unique, beautiful. Professor Gray, a master of technique, caused the piano strings to vibrate touchingly as he rendered "Schubert's Serenade." Dr. H. G. Wetherill, always eloquent, outdid himself in his portrayal of the life and work of our colleague and friend. His simple words, spoken from the heart, must rank as one of the most eloquent eulogies ever pronounced.

Miss Jessie Elliott sang "I stood on the Bridge at Midnight" with such effect that the sentiment of the song (which was one of the doctor's favorites and which the writer has heard sung in the same parlor) seemed to touch the sympathetic cord in every heart.

Dr. J. T. Eskridge, who had been intimately associated with Dr. Axtell in a professional way, spoke of him as a "brother," of their work together, and paid a high tribute to his life and character and of his good work done for charity and in the interests of scientific medicine.

Again the strings of the piano vibrated softly to the beautiful strains of Chopin's Funeral March.

Then Paul Lawrence Dunbar, the greatest poet of his race, read the doctor's favorite poem "Thanatopsis." A better selection could not have been made for every line of this sublime and

beautiful poem is a gem. As he closed the book Mr. Dunbar very touchingly recited his own poem entitled

"LIFE".

A crust of bread and a corner to sleep in,
A minute to smile and an hour to weep in;
A pint of joy to a peck of trouble,
And never a laugh but the moans come double;
And that is life.

A crust and a corner that love makes precious,
With a smile to warm and the tears to refresh us;
And the joys seem sweeter when care comes after,
And the moan is the finest of foils for laughter;
And that is life.

The services were closed by the song
"The Better Land," by Mrs. M. M.

George whose rich contralto voice appealed to every ear and as the beautiful melody was wafted gently through those silent rooms there were no hearts but thrilled and few eyes but wept.

Thus did we try to do honor to the memory of, and show our respect for, one who was an ornament to his profession and a martyr to science.

In closing the history of a brief life well spent we can but add

"His life was gentle; and the elements
So mixed in him, that Nature might stand up
And say to all the world, 'This was a man.'"

J. M. Blaine.

DR. WETHERILL'S REMARKS.

We have gathered about the casket of our friend to say a last fond adieu.

Speaking for his professional associates, colleagues and companions, I find words but poor instruments with which to express our sorrow, and my own grief for his loss, so profound that it seems most impossible to meet the emergency and say these few words regarding his past.

I shall pronounce no eulogy and attempt no praise; indeed, this would seem to be uncalled for and entirely unnecessary here in the midst of his collaborators, patients, friends and neighbors; for all these have known him and are here to-day to bear that silent testimony to his worth, uprightness and integrity, that is more eloquent than language, and best expresses your esteem and admiration for the man and his qualities. His past life, and the memory you have of his many lovable traits, will ever be his highest eulogy, for by his works you have known him.

Dr. Edwin R. Axtell was born in Washington, Indiana, thirty-three years ago. He received his degree in medi-

cine in Cincinnati in 1888. The following year he came to this city, and within a few days of his arrival became resident physician at St. Luke's Hospital, since which time all his energies, ambitions and hopes have been centered in his medical work in this community. He has always maintained an interest in connection with St. Luke's Hospital, and was for eighteen months its superintendent. From the beginning of his career in Denver he was associated more or less intimately with the teaching of medicine in the Medical Department of the University of Denver, for which institution he has ever had a large interest and warm affection.

He was for four years pathologist of the Arapahoe County and St. Luke's Hospitals. He was also connected with the Colorado Cottage Home and State Home for Dependent Children. For the last few years he has been editor and owner of the Colorado Medical Journal, which has vastly improved and enlarged in its good influence through his energetic efforts. At various times

he has been secretary of both the local and State Medical Societies, and he was for about eight years the secretary and treasurer of the faculty of the Medical Department of the University of Denver. As his successor in this last office, I have had many opportunities to know of the vast amount of work done by him for this medical school. During the last few years of his occupancy of this office, nearly all of the executive work of the Medical School fell upon his shoulders, and the skill, tact and energy with which it was carried on must ever be a monument to him.

During this time he saw the Medical School through many trials and tribulations, and but for his efforts it must long since have suffered greatly or entirely ceased to exist. His infinite genius for details, his executive ability, his tact and universal good temper, have piloted it through many difficulties. No one can know better than I, his successor, how much of this work he has done, nor how important and successful it has been.

When last spring other duties, including those of his Journal, crowded in upon him, he felt obliged to relinquish his office of secretary of the faculty, and I know, from the many talks I had with him on the subject at about this time, how much of a trial it was for him to do so—for though he had had his tribulations in this connection, and there had been at times some disappointments, his love for the Medical Department of the University of Denver, and for the work it was doing, had not abated.

He had long cherished a hope and ambition for an appointment upon the medical staff of the Arapahoe County Hospital, though he was already its pathologist. This reward, so amply earned and long merited, had at last

come to him, and he had just entered upon his first medical service at this hospital. Two weeks ago to-day, in his capacity as pathologist, he conducted an autopsy at the County Hospital, and it is believed that it is to this labor of love we must attribute his untimely death. The following morning, while assisting me with an operation, he spoke of having a cut upon his hand which he wished protected, for he was ever careful in such matters. Afterward he went to his office, where he had a violent chill. Having an appointment at the County Hospital, however, he insisted upon going to that institution, ill and unfit as he was. From there he went to his home and his bed, from which he was never to rise restored in health and strength.

His death, occurring, as it does, while in the midst of his life work, when the results of his labors were coming as a reward for his years of toil, while greatly to be deplored, seems appropriate. It has been said, "Greater love hath no man than this, that a man lay down his life for his friends," but a nobler death can come to a man as a result of duty well performed, particularly when that duty is solely and entirely a labor of love, without hope or promise of compensation, immediate or remote—a work of charity, pure and simple—a work in the interest of science, for the benefit of humanity and for the poor, homeless and friendless.

As pathologist of the County Hospital, he had taken many chances of serious injury and even loss of life. He had had other accidents not unlike this, any of which might have ended as this one has done. He was not deterred or swerved from his course by these mishaps, nor deflected by such warnings from the charitable work he loved.

"For such risks of life, men get the

Victoria Cross in other fields."

His life and death have most beautifully and perfectly exemplified the feelings, purposes and motives actuating the highest type of physicians: Those whose devotion to duty and interest in the science of medicine and the welfare of their patients outweigh all considerations of personal comfort and gain and belittle every risk to health and life.

A life history like this, and a death like his, reflect a radiance of honor and glory upon the medical fraternity of the world, and justify every physician in feeling an honest pride in his vocation.

Our regret for the death of our friend, at the early age of thirty-three

years, is not so much for him as for his family, his patients, his beloved science and ourselves. He is deprived of the fruits of his years of work; of the success and advancement he has earned, and of the pleasure of doing the good his enlarging opportunities afforded—but his family and friends are deprived of one whose place must ever remain vacant, and the world loses the labor of an honest man (the noblest work of God) just when he had approached the zenith of his power.

"Forgive these simple words that sound like praise;

The mist before me dims my gilded phrase;
Our speech at best is half alive and cold,
And save that tender moments make us bold
Our whitened lips would close, their truest truths untold."

DR. ESKRIDGE'S REMARKS.

It is always a painful duty to pay one's last respects to a departed friend. That duty is doubly hard and the feelings of anguish and sorrow are doubly acute when that friend is as near and dear to one as brother. My heart bleeds for the sorrow of a disconsolate and loving wife and of a fond and devoted father and for the friendship and pleasant association that we, his most intimate friends, have sustained in the lamented death of Dr. Axtell. He was so good, so clean, so thoughtful, so unselfish, so devoted and so anxious to make the lives of his friends happier and pleasanter.

It is not of our personal, intimate and devoted friendship of which I wish to speak to-day, so much as of that broader friendship and fellow-feeling which he had for humanity at large, and especially for those who had a spark of human kindness in them and were struggling against odds.

(3)

Dr. Axtell had a kind and responsive nature, and this made him many devoted friends. The medical student and the young, struggling physician recognized and appreciated his sympathetic nature and found in it help, which enabled them to persevere and overcome obstacles which had seemed to them insurmountable. No one who was endeavoring to make something of himself ever appealed to Dr. Axtell in vain. He was a friend of the friendless, a helper to those who needed his aid and sympathy.

He came to Denver ten years ago, unknown and knowing no one. He entered St. Luke's Hospital as resident physician and proved himself so valuable to that institution and so helpful to the attending physicians that it was not long before every man on the staff was his friend and desired to reciprocate in every possible way for his advancement.

After leaving the hospital he opened an office without money and without patients. The friends that he had made were staunch and came to his rescue by giving him scientific work to do for which he received enough to support himself. He did his work so thoroughly and conscientiously, and withal maintained his kind and genial nature in a manner so unruffled that patients and physicians learned to appreciate him more and more. For a number of years he worked early and late. If there were no patients for him to see, no suffering poor who sought his aid, he studied and worked with his scientific instruments. No time was allowed to go by unemployed.

His patients were so pleased with him on account of his kind and untiring attention and his pleasing manners that they sent others. I doubt whether

any physician in Denver has more devoted friends than Dr. Axtell had among his patients. But just at the time when he had begun to approach the vigor of his manhood and reap the reward of years of toil, and end the struggle against odds that have discouraged many another one, he is cut down by the germs that he had spent so much time in investigating. "Oh, fate, how cruel thou can'st be and hast been."

Dr. Axtell lived a useful life and showed us how much a manly man can do. His life has many lessons for us all. His friends, in general, will respect his memory and mourn the loss caused by his death. To his intimate friends, who knew all sides of his genial and goodly nature, there was, there is, there cannot be a kindlier, gentler, truer, purer friend.

Obituary.

Edwin R. Axtell, M. D., Denver, Colo.

Dr. Axtell was born in Washington, Indiana, February 7, 1866. After receiving his preparatory education, he studied medicine and graduated from the Miami Medical College, Cincinnati, in 1888. He served for a year as interne in the Cincinnati Hospital, in which position he discharged all his duties so faithfully and conscientiously, and proved himself so valuable to the attending physicians that he gained many friends and left the hospital at the end of his term beloved and respected by all.

Dr. Axtell went to Denver in 1889 and spent eighteen months as interne in St. Luke's Hospital, where the same industry, conscientiousness and faith-

fulness characterized his work and treatment of patients, with his courtesy and loyalty to the attending physicians, that had attended his residence in the Cincinnati Hospital. After leaving St. Luke's Hospital he opened an office and began to devote himself to the use of the microscope in the study of histology, pathology and the investigation of the micro-organisms. He did his work so thoroughly in this line that he was able to throw light on many subjects which were bothering his fellow-practitioners. He was pathologist to St. Luke's and the Arapahoe County Hospitals for five years, and at the time of his death was one of the attending physicians of the latter hospital. He was

connected with the University of Denver Medical Department for a period of about eight years, first as lecturer on pathology and for the last four or five years as lecturer on renal diseases. He was secretary and treasurer of the faculty for a number of years. He was the father of The Colorado Medical Journal and its editor and proprietor from the first issue to the time of his death. His editorials were clean, spicy and readable.

On December 1st of the present year, while making a post-mortem examination of the body of a patient that had died of sepsis, he cut his hand, and from this wound became infected and

died two weeks later from the result of the poisoning.

Dr. Axtell was greatly beloved by his patients and by his numerous friends among the medical profession. There has been no one who has been more loyal to his friends, more conscientious in his work, or more faithful in the performance of his duties than the lamented Dr. Edwin R. Axtell. His life was clean, his professional honor unsoiled and he left us prematurely, just at the time when he had begun to reap the fruits of years of industry, toil and the patient study of disease.—The New York Medical Journal, December 30, 1899.

Resolutions.

The resolutions of the medical societies of which Dr. Axtell was an honored member:

At a joint meeting December 14th of the Denver and Arapahoe County Medical and Denver Clinical and Pathological Societies, and of the members of the medical and surgical staffs of the Arapahoe County and St. Luke's Hospitals, the following preamble and resolutions were adopted:

Whereas, Dr. Edwin Rodarmel Axtell has endeared himself to the physicians of Denver by his clean life, his gentlemanly and courteous manners and his devotion to duty and scientific medicine; and,

Whereas, he has met with an untimely death before he had reached the zenith of his power, and at a time when success was beginning to crown his efforts; and,

Whereas, his death was the result of an infected wound received in the performance of his duty, we recognize in this sacrifice the highest ideal of man and hero; therefore

Resolved, that we engrave upon our records these resolutions as a slight token of our highest esteem and forward to Mrs. Axtell our expression of deepest sympathy, with the assurance that "he who lives in the hearts of others is not dead."

J. T. Eskridge,
Leonard Freeman,
William C. Bane,
F. E. Waxham,
F. H. McNaught,
J. M. Blaine,

Joint Committee.

December 14, 1899.

At a meeting of the board of supervisors of the County Hospital, held December 15th, the following resolutions on the death of Dr. E. R. Axtell were adopted:

Whereas, Dr. E. R. Axtell, a member of the hospital staff and for many years the pathologist of the hospital, has just died from blood poisoning contracted in the discharge of duty; therefore

Resolved, that in his death we mourn the loss and companionship of a conscientious, able and useful man, whose place is not easily filled.

Resolved, that a copy of these resolutions be placed on file in the hospital records and also a copy be sent to his wife.

F. Watts, Chairman,
W. W. Grant,
R. F. Le Mond,
J. B. Kinley.

From the Jewish Hospital for Consumptives.

We, the members of the medical and surgical staff of the National Jewish Hospital for Consumptives, desire to express our profound and sincere sorrow at the untimely death of our colleague, Dr. Edwin Rodarmel Axtell, who is removed from our midst by an infection received during the performance of his duty. We had recognized in the deceased one whose high professional standing reflected thorough scientific attainments, who was ever conscious of his obligations as a physician and a man and was devoted to them; we have known him as a tried friend and in all, a splendid type of manhood.

We deplore his absence from our ranks as removing a real influence always exerted for the realization of highest ethical standards recognized by our profession, and especially feel that

the loss of his service to this body is one that cannot well be replaced.

To his bereaved wife we extend our sincere sympathy and condolence.

Dr. R. Levy, President,
Dr. Bane,
Dr. S. Simon, Secretary,
Dr. S. Meur,
Committee.

Extract from the minutes of the executive committee of St. Luke's Hospital, held this 14th day of December, 1899:

Whereas, we have heard with sincere sorrow of the sudden and untimely death of Dr. Edwin Rodarmel Axtell; and

Whereas, we remember with gratitude his valuable services as superintendent of St. Luke's Hospital, and as a member of the surgical staff; therefore be it

Resolved, that we tender to Mrs. Axtell and his bereaved family our sincere sympathy, and enter these resolutions on our records in recognition of one whose place will be difficult to fill, and whose helpful presence and scientific skill will be sadly missed.

Whereas, we, the members of the board of the Cottage Home, have heard with deep regret of the death of our beloved physician, Dr. Edwin Axtell; and,

Whereas, for several years his professional skill has been given freely and gladly to the erring but suffering girls who have sought shelter in the Home, while his unvarying courtesy and kindness have won the love and confidence of us all; therefore

Resolved, that we extend to his bereaved family our tenderest sympathy, feeling sure that while great as is our loss, theirs is infinitely greater, and we can only commend them to our loving Heavenly Father.

Mary Carlisle Hearon, President.
Susette E. Pease, Cor. Sec'y.

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E. R. AXTELL, M. D., Editor and Publisher.

M. M. GEORGE, M. D., Associate Editor.

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No. 1.

EDITORIAL.

Mrs. Axtell having been closely associated with Dr. Axtell in the publication of the Colorado Medical Journal since its birth, has assumed the work of publishing this number, with the assistance of the associate editor, Dr. M. M. George.

EDWIN R. AXTELL; THE MAN.

A period of something over nine years covers the growth of a personal acquaintance which gradually ripened into an intimacy and was cemented into a strong friendship. During that time it was my privilege to learn to know him well. I found beneath the external mantle of cheerful optimism a depth and seriousness of character that commanded profound respect, mingled with a breadth of human sympathy that was

great enough to condone many differences of judgment on the part of others.

This was, indeed, one of the most salient points of his lovable character, and explains why the expressions of genuine grief at his loss come from such an extended circle of varying interests and hostile beliefs. One might differ from him most widely both in acceptance of principles, judgment of motives and decisions as to course of action, yet discussion or difference with him was ever free from rancorous spirit. He had no boundless ambitions for soul compelling power, yet the genuine lovable-ness of his nature, combined with his ruthless frankness of expression, at times was more convincing than many sombre arguments backed by subtle tactics. His influence among

the profession was therefore great because it was known to be disinterested; his actions were ever straightforward; his course his own; he was the captain of his own soul.

There was never a time in all the years of our acquaintance that I found him unready to respond to any call upon his time and services. This was all the more praiseworthy because so much of the work he was asked to do was disagreeable, dangerous and without monetary recompense. In the end it was such work that brought to him, through long days and nights of suffering, a heroic death. This was the legitimate end of a life spent in daily exposure to such danger—a danger from which those who court spectacular heroism would shrink in utmost fear—a danger whose fatal touch is so full of suffering and anguish that the Mauser bullet is most merciful in comparison. Yet with the fullest comprehension of its imminence, he exposed himself to it day after day for years. This was because he worshipped Duty.

In the greatest personal intimacy I found him ever clean of thought, pure of heart, sincere in purpose. A manly man in every word and action; a womanly man in thoughtfulness, true courtesy, love of children, sweetness of disposition. A man dear to his friends, respected by his opponents, feared yet not hated by the few enemies that strength of character inevitably makes.

"Here's rosemary for remembrance."

Wm. P. Munn.

THE DOCTORS' DANGERS. DEATH OF DR. EDWIN R. AXTELL.

No other class of men, not even soldiers, are more exposed to deadly perils than the medical profession. The fact is sadly illustrated by the late

death of Dr. E. R. Axtell from septicemia, caused by performing an autopsy on a patient at the County Hospital. Cut off in the early prime of a life of much hope, his sudden demise is universally regretted by the physicians of this city.

Not for many years has such a pall fallen over the profession of Denver as that caused by the death of Dr. E. R. Axtell, on December 14th. His death was due to a virulent streptococcic infection incurred during the performance of a post-mortem examination upon a subject dead of sepsis at the Arapahoe County Hospital, December 1st.

Dr. Axtell was 33 years of age and had practiced in Denver about eleven years, including the time of his internship at St. Luke's Hospital. Especially interested in bacteriology and pathology, he had done much excellent work along these lines, being connected with the Arapahoe County Hospital and St. Luke's Hospital, as pathologist. He had recently been appointed to the visiting medical staff at the former institution, and was serving his last month as pathologist at the time of his infection. He also served upon the medical staff of the State Home for Dependent Children and that of the Cottage Home.

He had just reached the point where, having laid a magnificent foundation for a life's medical work in the study of his favorite branches, too often neglected by the physician, he was beginning to reap the harvest in more strictly clinical work. His death is peculiarly sad for two reasons: He died of one of the dreaded diseases to which all medical men are liable, and which we have with us always; and he died just at the beginning of his harvest-time. When, after two score years of labor in the profession, a physician

lays down his burden, we may feel that, although still capable of much more work, perhaps, he has still done most of his life's labor, and his death, sad though it is, is yet after the natural order of things. It is sorrowful to see the young graduate cut down before trying his armor in the battle of life, but the most heart-breaking death is that of the young professional man who has worked hard for his education, and then stood the buffeting of the world for the last decade until, at last, he feels his place secure beneath him, when the grim reaper comes. It is especially to be deplored when, as in this case, so excellent a preparation had been obtained for future usefulness.

Dr. Axtell was eminently a worker. He once sighed, as he remarked to me, "that it was too bad that a man had to sleep eight hours each day, for the time would be of so much use for study." It is common to praise brilliancy in the student, a good thing so far as it goes, but not commonly associated with the other qualities which go to make up the best physician. The more I see of medical men, the more I love the man of good parts, of thorough going common sense, of unbounded love of work, and capacity for doing it well. Such a man may not rise to the surface as quickly as some, but he is certain to rise in time; his future is certain. Dr. Axtell represented this ideal better than almost any man of his years in our local profession, and would have become a commanding figure as the years passed by. Years ago the doctor spoke sadly to me of the difficulties in the path of the young physician. A few Sundays ago he drove with me to the County Hospital, to make a post-mortem examination. He said that he almost thought that no one should practice medicine who had not

an independent income beforehand, in order that he might not be handicapped in a life where so much time must be devoted to scientific work. Yet, for the difficulties of which he spoke, there is the compensating advantage that the necessities of one's early professional life commonly result in harder work to surmount them. We only regret that Dr. Axtell could not have lived to profit by his early labors.

If one must die, there must be a grim satisfaction in the thought that death comes while one still stands at his post, as the soldier would rather die suddenly of the bullet than waste away with the fever. Yet it is a strange fatality that brings death to the bacteriologist through the very germs he has so long studied.

The doctor leaves a widow, but no children. Mrs. Axtell was intimately bound up in his professional life, especially in the conduct of the Colorado Medical Journal. She has a wide acquaintance in the profession, and commands its profoundest sympathy.—J. N. H., Denver Medical Times, January, 1900.

SLOW PROGRESS OF CREMATION.

The funeral of Dr. Axtell, without religious ceremony and without any of the melancholy emblems of sadness, together with the announcement that his body is to be cremated at Cincinnati before the ashes are buried in Indiana, suggests the reflection that at the close of the century cremation has made much slower progress than was expected some forty years ago.

There is no necessary antagonism to any religious creed in cremation. The injunction that we shall return to dust is not violated by it. The last look at the loved face can apparently be taken

just as well before the furnace is fired as before the grave closes. Cremation does not, as many suppose, antagonize cemeteries and monuments to the dead. Tombstones to the memory of the departed can as well be built over graves containing iron urns with ashes as over graves holding bodies.

The arguments in favor of cremation are admitted on all sides to be strong. It prevents epidemics that have frequently arisen from seepage into the water supply of the neighborhood. Best of all, it takes from our beautiful cities of the dead their repulsive feature.

Probably the chief obstacle to the progress of cremation is the prevalent notion that whoever adopts it advertises himself as an infidel or atheist. No greater delusion could exist. There is nothing about it inconsistent with the most pious life or most somber obsequies. If the various churches should affirmatively adopt it, and there is nothing to prevent any of them from doing so, it would doubtless become universally popular. Indeed, such church sanction seems to be necessary to make it popular even among the thousands who do not attend church and who accept no religious creed.—Editorial, Denver Republican, December 18, 1899.

THE DEATH OF DR. AXTELL.

The untimely death of Dr. Edwin Rodarmel Axtell, which occurred on December 14th, was the sad termination of a life full of bright possibilities. As the result of an autopsy held on the body of a patient at the Aopahoe county Hospital on December 1st, he became infected; eighteen hours later he had a severe chill, followed by an unusually high temperature. After suffering intensely for two weeks he died on December 14th.

No hero of history ever endured with more bravery and fortitude the intense suffering and the mental anguish that he experienced in the knowledge of his life work unfinished, and his ambitions unrealized.

In his death the medical profession of the West has lost a valuable man. Although young, his unusual energy and devotion to medical science had placed him up in the ranks of his profession. As editor of the "Colorado Medical Journal" his knowledge and good judgment, together with his systematic nature and keen intuition, made that magazine one of the foremost journals of the West.

Fair and liberal in all things, generous and self-sacrificing to a fault, his was a clean and noble life; and his friends of the Homeopathic school mourn with his family the loss of a valued friend and of a bright star in medical profession.

C.E.T.

—THE CRITIQUE, Jan. 1900.

I know my hand may never reap its sowing,
And yet some other may;
And I may never even see it growing—
So short my little day!

Still must I sow—though I go forth weeping,
I can not, dare not, stay.
God grant a harvest! though I may be sleeping
Under the shadows gray.

BOOK REVIEWS.

KNOPF. PULMONARY TUBERCULOSIS: Its Modern Prophylaxis and the Treatment in Special Institutions and at Home. Alvarenga Prize Essay of the College of Physicians of Philadelphia for the year 1898, revised and enlarged. By S. A. Knopf, M. D. (Paris and Bellevue, New York); Physician of the Lung Department of the New York Throat and Nose Hospital; Vice President of the Pennsylvania Society for the Prevention of Tuberculosis; Fellow of the American Academy of Medicine; Laureate of the Academy of Medicine of Paris, etc. With descriptions and illustrations of the most important Sanatoria of Europe, the United States and Canada. Octavo. Price, net, \$3.00. P. Blakiston's Son & Co., 1012 Walnut street, Philadelphia, Pa.

No medical book that we have read within the past year has given us so much pleasure, so much instruction, so many new ideas on things that one prides himself on knowing something about, as this book on the problem of pulmonary tuberculosis, with description of Sanatoria and special hospitals for consumptives. It is in every sense modern, well written, attractively gotten up, and is a book that we prize most highly.

The scope of the book embraces the problem of communicability; the means to combat its propagation by individual prophylaxis; the problem of public prophylaxis, the question of prevention;

climato-therapy; the author's idea of an ideal sanatorium, and the treatment of pulmonary tuberculosis, including aërotherapeutics, rest cure, exercise, pneumatic cabinet, hydrotherapeutics, dietetic treatment, symptomatic treatment and the problem of marriage and child-birth.

Chapter twenty is devoted to the question of tuberculin and other serums. The author reviews the matter very fairly and sums up the question in these words: "The results of the use of any serum reads about as follows: A large percentage of incipient cases cured; a small percentage of advanced cases benefited; a small percentage indifferent to treatment; a very small percentage of deaths. Yet cannot anyone, private practitioner or sanatorium physician report just as good and even better results whenever the hygienic, dietetic, symptomatic and educational treatment has been carried out conscientiously without the aid of any specific or antibacillary remedies?"

He mentions Brunet's "lung juice" and Cervello's "Formalina," but dismisses them as being too new to comment upon at this time.

His chapter on climato-therapy we could wish to be more extensive. Those of us who daily see what Colorado can do for pulmonary invalids in the face of all kinds of adverse circumstances, would like to have the problem of altitude given more prominence, and certainly its action upon respiration, circulation and the blood state more fully

set forth. The author asserts that "climate is not a specific." Colorado has something more than climate; it has altitude, which is a factor of so much importance that it ought to have received more attention.

He recommends for high altitudes, early cases with no throat complications, persons with a chest badly developed either by transmission of a phthisical predisposition or fault of development, and all ordinary cases of phthisis.

In the list of sanatoria, Colorado receives mention of three, with description of two, "The Home," or Denver, and "The Glockner Sanitarium" of Colorado Springs.

Regarding the "Home" of Denver the author says:

"When I visited this beautiful institution my first disappointment was to learn that the Home had no house physician. I passed through the corridors, library and dining-room and looked at the many cheerful and bright bedrooms. The air outside was brisk and clear and the sun shone; but not one window was open and the atmosphere inside the institution was far too warm and certainly not fresh enough to be of any benefit to the patients, who were nearly all indoors. While I have no doubt that every precaution is taken on the part of the management in regard to the sputum, to supervise constantly eighty odd tuberculous patients and see that there should never be any violation of the sanitary rules and regulations of the house, requires more than the gentle hand of a minister or matron. Aside from this, it is my firm conviction that, in the interest of the patients, as well as in the interest of the community at large, there should never be so great a number of tuberculous invalids without the constant presence of a med-

ical attendant. At no period in the course of the disease should the tuberculous patient be 'kept;' he should always be treated. I make this criticism in the spirit of kindness, for I think it just as essential to describe existing defects as to emphasize the advantages which the various institutions I visited had to offer."

The Colorado Sanitarium at Boulder is mentioned, but not described.

After describing "The Home" and commenting upon its general arrangement, the author concludes.

* * * * *

The book gives evidence of exhaustive preparation, of close and earnest study, and we extend to Dr. Knopf our thanks for the pleasure derived from his labor. Dr. Knopf is now living in New York City.

[The above review was in the course of preparation by Dr. Axtell at the time of his last illness, and is here inserted just as found in the leaves of the book.—Ed.]

A COMPEND OF THE DISEASES OF THE EYE AND REFRACTION, INCLUDING TREATMENT AND SURGERY. By George M. Gould, A. M., M. D., Formerly Ophthalmologist to the Philadelphia Hospital, and Walter L. Pyle, A. M., M. D., Assistant Surgeon to Wills Eye Hospital, Philadelphia. Second edition, revised and enlarged. One hundred and nine illustrations, five of which are in colors. Price, 80 cents. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street, 1899.

Of the various compends on diseases of the eye this revised edition is one of the most complete, up-to-date works of

its class that has been issued. It is, in fact, quite equal to some of the smaller text-books on the eye. It might properly be termed a manual, so complete is it in the description of the anatomy, physiology, optics, refraction, and the various diseases of the eye and their treatment. The illustrations are excellent, several of which are in colors. The chapter on local ocular therapeutics includes the newer remedies, and will prove a valuable aid to the student and practitioner.

WM. C. B.

COAKLEY ON THE NOSE AND THROAT. The Diagnosis and Treatment of Diseases of the Nose, Throat, Naso-Pharynx and Trachea. For the use of Students and Practitioners. By Cornelius G. Coakley, M. D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York. In one handsome 12mo. volume of 536 pages, with ninety-two engravings and two colored plates. Cloth, \$2.75, net. Lea Brothers & Co., Philadelphia and New York.

The aim of the author has been fully attained in the manual before us. The anatomy and physiology are briefly and clearly described. Special emphasis has been laid upon the essentials, that of the examination, diagnosis and treatment. In this day when so many of the manuals and text-books are the work of different authors or contributors, it is refreshing to review a work that is so uniform, complete and yet without repetition. The chapter on therapeutics is excellent and the author only recommends remedies that he

has used with good results. The index is much fuller than is found in many text-books. The author and publishers are to be congratulated upon the issuance of such a valuable manual for students and practitioners.

W. C. B.

A TEXT-BOOK ON OPHTHALMOLOGY. By Dr. Ernest Fuchs, Professor of Ophthalmology in the University of Vienna. Second American Edition, translated and revised from the seventh enlarged and improved German edition, by A. Duane, M. D., Assistant Surgeon, Ophthalmic and Aural Institute, New York. 8 vo.; cloth, \$5; sheep, \$6. Sold only by subscription.

Since the first American edition of this work was published in 1892 five German editions have been issued. It would seem strange that the second American edition has not appeared sooner as it has been recognized as one of the most complete and best works on ophthalmology ever published. Dr. Alexander Duane, of New York, who was the translator of the first edition, is also the translator of the second edition. He has so thoroughly adapted the book to American uses that it hardly seems like a German translation. The present edition has been most thoroughly revised and much new matter added both by the author and the translator. It is thoroughly up-to-date in all its parts. It is well adapted to the student as well as the practitioner. We heartily recommend it.

Melville Black, M. D.

PROGRESSIVE MEDICINE—VOLUME

IV. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 398 pages, 51 engravings and 5 plates. Lea Brothers & Co., Philadelphia and New York.

The fourth volume of this exhaustive subject lacks none of the careful thought and preparation that has been given to the three preceding volumes on the same subject. Special attention has been given to diseases of the digestive tract and allied organs, the liver, pancreas and

peritoneum, genito-urinary diseases in the male, and syphilis, fractures, dislocations, amputations, surgery of the extremities and orthopedics, diseases of the kidneys, physiology, anatomy, hygiene, practical therapeutic referendum.

With so many subjects to treat of, and with such a talented array of collaborators to contribute to the work, its value is at once apparent. And the name of Hobart Hare, as editor of the work, gives it a prestige that cannot be undervalued. It is a substantially bound book, with abundant illustrations, and no up-to-date practitioner of medicine ought to feel satisfied with his library without these four volumes are found therein.

The furniture, instruments and other appurtenances of Dr. Axtell's Offices are now on sale at Room 18 Barth Block, where Mrs. Axtell will dispose of them at private sale, each day between the hours of 10 and 12 o'clock and 2 and 5 o'clock.

THE COLORADO MEDICAL JOURNAL

AND WESTERN MEDICAL AND SURGICAL GAZETTE.

A Scientific Medical Journal, Published in the Interest of the Profession of Colorado and Adjoining States. A Truly Local Journal.

A Journal of Science, of News and of Medical Lore.

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No. 2.

ORIGINAL COMMUNICATIONS.

Suppurative Lesions of the Kidney.*

By A. STEWART LOBINGIER, A. B., M. D.

Professor of the Principles of Surgery and Clinical Surgery, University of Colorado;
Professor of Oral and Clinical Surgery, Colorado College of Dental Surgery;
Visiting Surgeon to the University Hospital.

The suppurative diseases of the kidney afford a field for the most consummate skill in diagnosis and treatment. No domain of surgery contains a more complex pathology or calls into requisition more elaborate measures for correctly determining the character and degree of pathologic change. Each year brings with it certain valuable contributions to this field of study, whereby we are enabled to arrive at the desired diagnosis and remedy with greater accuracy and facility. But nevertheless, we are still hampered by many crudities in technique, which must gradually give way to methods of more positive certainty and refinement.

I shall discuss the pathology, symptomatology and treatment of but a few of the more important of the renal suppurations.

Pyelitis need not concern us here save as a precursor of the structural changes in the kidney proper. In nephrolithiasis or in acute septic in-

volvement with primary gonorrhoeal infection and extension, it becomes a formidable complication with the subsequent parenchymatous changes.

So far as our present crude methods of determining avail us, we believe most of the renal suppurations to arise either from direct extension of infective bacteria from the urethra or bladder along the ureter and pelvis into the calices and medullary substance; or by metastasis, i. e., hematogenous or lymphatic, from some previously infected area.

The bacteria which are most destructive are the bacterium coli commune, the streptococcus and the staphylococcus pyogenes. Other bacteria may take part in a mixed infection, such as the bacillus tuberculosis, gonococcus, pneumococcus and bacillus typhosis.

These bacteria overcome the nucleinic resistance of the renal cells more quickly in chronic alcoholics and

*Read by invitation before the Pueblo County Medical Society, May 3, 1899.

in syphilitic, tubercular, gouty and malarial subjects. Patients are more liable to infection whose tissue resistance has been seriously depressed by protracted dysenteric discharges; chronic suppurative changes in other areas; lead, mercury or phosphorus poisoning or prolonged exposure to dampness, cold or any depressing environment occasioning a more or less definite leucocytosis.

One of the commonest exciting causes of renal suppuration is uric-acidemia resulting in renal calculus. If the calculus be encysted or arrested in its descent toward the pelvis, it may lie quiescent for years with but slight irritation. But if it project into the pelvis or lie loose within its walls, the stone will quickly block the mouth of the ureter, and irritate and destroy the mucosa. The area is soon infected and the condition resulting is pyonephrosis. Shreds of tissue from the disintegrating mucosa and calices contribute to the obstruction of the ureter. From time to time, owing to some changed posture of the patient, the stone may gravitate away from the mouth of the ureter and the sanguino-purulent material will pour into the bladder, increasing the quantity and specific gravity and changing the microscopic appearance of the urine to a marked degree.

In nephrolithiasis, with the stone free in the pelvis, pyonephrosis sooner or later is inevitable. If this condition is permitted to exist for several weeks or months without relief, extension of septic bacteria along the collecting and convoluted tubules, even to the glomeruli themselves, is certain to ensue and we have resulting a pyelonephritis. In pyelonephritis, colonies of the septic cocci are disseminated throughout the

entire tubular system of the kidney. They produce in the lining epithelium a cloudy swelling, granulo-fatty degeneration and desquamation in no wise different from that found in chronic nephritis. I have repeatedly examined pyelonephritic kidneys in which there was not the slightest difference to be discovered between chronic Bright's and the septic nephritic, except that in the latter there were everywhere septic micrococci and in the old cases considerable amyloid change in the glomeruli, resulting, not from syphilis, but from chronic sepsis.

The picture here presented is the usual pathology in cases of nephrolithiasis, followed by pyonephrosis and pyelonephritis. Should the patient survive these destructive changes, the suppuration, if not relieved by operation, will not only destroy the entire parenchyma of the kidney, but will burrow or burst through the capsule and infiltrate the perinephric tissue. In the specimen I show you, this necrobiotic process had reached the capsule in certain loci, but had not passed beyond it. The exhibit is typical of the extreme and neglected cases and is a graphic illustration of this interesting series of pathologic changes. It must not be presumed from these utterances that pyonephrosis depends exclusively upon nephrolithic obstruction. Shreds of disintegrated calices from simple septic or from tubercular degeneration may engage in the orifice. Indeed the ureter may be occluded at any point in its course. This may be caused by tubercular ulceration and hyperlapseia, resulting in stricture; or it may be due to pelvic tumor or abscess; or to tumors or abscesses in either of the hypochondriac regions.

Hematogenous and lymphangic infections of the kidney represent a more acute involvement. Metastasis arises through a septic embolism from a pre-existing ulcerative endocarditis or a pyophlebitis or lymphangitis. Retro-peritoneal abscesses; thoracic empyema; psoas abscess and caries of the spine; primary abscess of the liver; osteomyelitis and septic arthritis are remote causes of a pyemic condition which may result in pyonephritis. I have known cases which could be clearly traced to an appendiceal abscess; and others to septic salpingitis, abscess of the ovary or septic parametritis.

The pathology in these cases differs very materially from that of infection by extension. The necrobiosis is more rapid and the ptomaines produced are more highly toxic than in the extension cases. Large abscesses form quickly and the perinephric tissue is soon involved. Instead of the micrococci being disseminated through the tubules, they are focalized in the glomeruli, which become the centers of destructive change. From the glomeruli through the efferent venules, which run to the cells of the tubules, colonies of the cocci are sent to these cells, causing speedy destruction and additional suppurating foci. We thus find that the cortical and subcortical, rather than the pyramids of the kidney, are the areas most commonly destroyed; and the symptoms, as we shall later see, are decidedly masked by those known to be typical of pyemia.

Perinephric suppuration may be primary or by extension. In primary infection it is manifest that the septic bacteria had been some time present, so that when the tissues suffered some traumatism or acute congestion, lower-

ing their vitality and resistance, speedy infection ensued.

Maas (1) of Berlin considers the fatty investment of the kidney especially prone to suppuration on account of its vascularity and free anastomosis with contiguous vessels. He considers more than half of the cases of perinephric abscess of extremely obscure etiology, and regards the so-called cases of "primary suppuration" with great distrust, believing them to be due in most instances to metastatic infection.

Niebergall (2) estimates that a very large per cent. of the primary acute cases may be traced to injury or strain such as might be produced by heavy lifting, jolting in a rough wagon, jumping from a height, spading and digging, and even riding horseback.

By far the most common cause of perinephric abscess is extension of septic material, directly or indirectly, from a remotely infected area. It is remarkable how many intra and extra-abdominal suppurations may be involved in the genesis of suppurative perinephritis. The more prominent among these are caries of the spine; pulmonary abscess; subphrenic abscess; hepatic, splenic and peri-appendical abscess; ovarian and parametritic suppurations; testicular, ischio-rectal and sacro-iliac abscesses; and finally metastasis, septic phlebitis, ulcerative endocarditis and purulent proctitis have been known to infect the fatty capsule of the kidney.

In my observation, these abscesses have formed most commonly by direct extension, either from pyelonephritis, pyonephrosis or a calculous pyelitis; or from a peri-appendical or subphrenic suppuration. Two cases are recalled of very extensive perinephric abscess, the histories of which proved them to have

been simple cases of primary renal tuberculosis, with the mixed infection and extension to the capsule supervening.

The bacteria found present in a perinephric abscess are substantially the same as those found in the simple renal suppurations. The colon bacillus may infect the capsule either by extension from an appendical abscess or more directly from a suppurating kidney; or it may come from the hepatic flexure of the colon itself, when the walls of this structure are degenerating from ulcerative or malignant changes.

Ordinarily the character of the pus found in a perinephric abscess is neither offensive or highly toxic. But if the colon bacillus and the streptococcus be present in large colonies, the reverse is true, and the evidences of systemic poisoning will be pronounced.

The *cardinal symptoms* of *pyonephrosis* are blocking of the ureter by a calculus or shreds of necrotic tissue, or by both, followed by acute colicky pains, diminution of pus in the urine and decrease in the quantity of urine passed by the patient. These symptoms will in most cases be followed closely by a rigor and decided rise in the temperature. The temperature may reach 104° F., and usually ranges from 101° F. to 103° F. In cases of pre-existing hydronephrosis, where the retained secretion has become acutely infected by septic bacteria, the pyonephrosis is ushered in with a sharp chill and rise of fever.

Should the obstruction to the ureter persist, a tumor will form in the kidney affected, and this will be tender to pressure on manipulation and may or may not, according to the degree of distension, give signs of fluctuation.

Where the obstructing calculus or clot drops away from the ureter, back into the renal pelvis, there will be a sudden increase in the quantity of the urine and of the pus and blood and debris which composed the retained fluid. Immediately following this discharge of imprisoned septic material, there is a subsidence of temperature and abolition of chills.

From this clear picture of pain, tumor, intermittent pyuria and sepsis, there may be many modifying influences to lead even the most painstaking diagnostician astray. Pyonephrosis will need to be differentiated from acutely forming perirenal abscess; hydronephrosis, carcinoma of the pancreas and stomach and abscess of the liver and spleen and retroperitoneal glands. It has been confused with aortic aneurism and fecal impaction.

Most of these conditions may be eliminated if strict attention be given to the analysis of the urine, and observation of the change and intermittency in the size of the tumor and symptoms of septicemia. In perinephric abscess, as we shall see, there is rarely, and only in the acutely destructive variety, pus in the urine. This, if present, will either be slight, or if excessive, will imply a pyonephritis complicating the perirenal suppuration, and a differentiation would in no wise affect the treatment.

While in the remainder of the conditions cited there would exist in both classes pain and tumor and probably leucocytosis, and in one class evidence of septic absorption, there would be little or no variability in the size of the tumor, in the degree or persistency of the pain, or in the septic curve, to say nothing of the total absence from the urine of signs pointing to the lesion

as that of pyonephrosis. What has been said respecting the symptoms and differential diagnosis in pyonephrosis will apply, with a few modifications, to *pyelonephritis*. In the discussion of the pathology of the renal suppurations, it was found that a common course of these lesions led upward from a condition of simple renal calculus, free in the pelvis, to calculous pyelitis, pyonephrosis and pyelonephritis, in which pyuria was a symptom common to all of them. In addition to pyuria and septic infection from retention, one of the gravest symptoms in pyelonephritis arises from uremia. Associated with this there commonly exists the most distressing gastric irritability, and the patient through excessive vomiting and hiccough and possibly depressing sweats from sepsis, rapidly succumbs to these overwhelming conditions. Even in the less acute involvement, the combined influences of slow sepsis and uremia as manifested in chronic diarrhoea and gastritis, eventually so deplete the patient as to make his case, if long neglected, one of doubtful remedy.

If pyelonephritis have an antecedent history of calculous pyelitis, it is usually preceded by, and associated with a pyonephrosis. In such cases, if the obstructing calculus still remains in the pelvis, intermittent pyuria will constitute here, as in uncomplicated pyonephrosis, a characteristic symptom. But many cases of pyelonephritis do not have an antecedent history of stone, and we have found that patients may pass quantities of pus uninterruptedly for weeks and months without pain or the slightest knowledge on their part of the existence of pus in the kidney. The appearance of the urine in some cases of chronic pyelonephritis

does not differ greatly from that of chronic parenchymatous nephritis. Generally, however, we find a larger quantity of pus, less albumen, fewer casts and those chiefly hyaline and granular, in the chronic septic cases.

As a rule the distinguishing points in the diagnosis of pyelonephritis are moderate pain and tenderness in the affected kidney, a slight tumor on palpation, pus with hyaline and granular casts uninterruptedly present in the urine, an increased quantity of urine, and gastro-intestinal catarrh.

The difficulty of diagnosing pyelonephritis from uncomplicated cystitis is familiar to every surgeon. Cystitis is practically a constant sequel, if it has not been a precursor, of pyelonephritis. A differential diagnosis can be made absolutely only by means of the irrigating cystoscope or catheterization of the ureters.

For the former exploration Casper's instrument and technique, familiar to most of us, affords the most satisfactory results.

Kelly (3) has shown us in his contribution just a year ago on ureteral catheterization in the male how satisfactory this operation has proved in his hands. Those who have familiarized themselves with the technique of cystoscopy as laid down by Nitze and by Casper have been able to accomplish a great deal in determining the character and extent of disease in the bladder and kidneys. But we are again made debtors to the genius of Howard Kelly for perfecting what he had faith from the start he could successfully accomplish, but of which many of us were in doubt,—the catheterization of the male ureters through a straight speculum, similar in form and calibre to that which he employed in ureteral

catheterization in women. There are many able authorities in this country who have not found either in careful analysis of the urine, in cystoscopy, in catheterization of the ureters, or in skiagraphy, absolute means whereby positive diagnosis of renal disease could be determined. Conspicuous among these is Edebohls, and because of his exceptional eminence in renal surgery, I quote somewhat liberally from his latest contribution on this subject (4):

"A majority of cases of surgical kidney, multiple abscess of the kidney, purulent nephro-pyelitis and renal tuberculosis elude diagnosis by palpation alone. Visual inspection of the interior of the bladder and catheterization of the ureters give valuable aid in determining the presence and condition of each kidney. The results of cystoscopy, however, will not invariably prove completely satisfying. It may not always be possible to recognize distinctly *both* ureteral orifices. Again, even if both ureteral orifices be distinctly seen, the result of watching them may prove misleading. Pus kidneys may discharge their secretions into the bladder at very irregular intervals and the result of inspection of the ureteral orifices, at any one, or several times, may prove entirely negative. * * * * * Another resource in determining the presence and condition of a kidney consists in collecting the urine of each kidney separately by means of catheterization of the ureters. This, however, has its shortcomings, drawbacks and contra-indications, which, unfortunately, greatly impair the usefulness and efficiency of what would otherwise be a nearly ideal method of obtaining information relative to each kidney taken by itself. I

say *nearly* ideal, because in pyuria of renal origin it indicates neither the extent nor the exact seat of the suppurative process; and in renal hematuria it tells us nothing of the lesion causing the hemorrhage. Nay, in renal hematuria we may even be unable to decide by catheterization of the ureters as to which kidney is bleeding, since catheterization of the ureters often (one writer states in 50 per cent. of cases) itself causes bleeding of the ureters."

Edebohls alludes to the danger, recognized by surgeons generally, of conveying septic material into an uninfected ureter by the attempt at catheterization, and insists that "the responsibility for this risk must not be lightly assumed by any man." The same might be urged against careless cystoscopy. Neither of these instruments should be employed by unskilled hands or manipulated by any one as a surgical toy.

Although he has faith that large aid may be had in the near future from skiagraphy and the fluoroscope in diagnosis of surgical diseases of the kidney, he is definite in his conclusion that: "For (5) ascertaining the condition of a kidney, as well as obtaining assurance of its presence, lumbar exploratory incision possesses advantages in positiveness and exactitude of resultant information over examination of the urine, palpation of the kidney, cystoscopy, ureteral catheterization, skiagraphy and the fluoroscope, while its risks and drawbacks, under modern methods, are scarcely greater than those of catheterization of the ureters."

Illustrating the possible limitations of skiagraphy in renal calculus, Le Conte (6) reported a case last year, representing all the classical symptoms of nephrolithiasis, in which

three skiagraphs gave an absolutely negative result. An exploratory operation with palpation and needling also resulted in failure to locate the calculus. Curiously enough the kidney was not incised, nor further explored, but returned, and the wound closed. About five weeks later, after a very severe paroxysm of renal colic, the patient passed *per uretheram* a calculus one-half inch long by one-quarter inch wide. Notwithstanding this instance of failure, and others which might be cited, wherein the skiagraph has given neutral evidence, we have too many examples in our own experience and from others on record to speak slightly of this aid to diagnosis.

We may recapitulate, therefore, briefly, that in addition to the ordinary means of palpation, as positive aids to diagnosis in suppurative lesions of the kidney, we shall find most assistance from: repeated and careful measurement and microscopic examination of the urine; inspection of the mouths of the ureters, under strict antiseptic precautions, by the irrigating cystoscope; catheterization of the ureters by Kelly's instruments and technique; and, for suspected renal calculus, neoplasm or foreign body, the intelligent employment of skiagraphy. Should the employment of these several and appropriate means fail to give the operator reasonably positive evidence of the condition of each kidney, I have no hesitancy in supporting the doctrine laid down in my quotation from Edebohls, and resorting to a carefully planned and speedily consummated exploratory examination of both kidneys.

The *symptoms* of most value in *perinephric suppuration* are pain, tenderness, tumor and fever. Where the infection has been acute, either from ex-

tension from the kidney or by the lymph or blood current, there is usually a chill, followed by high temperature. The tumor forms quickly in these cases, due to rapid development of pus, and the pain is of deep and intensely aching character. The pain extends downward towards the loin, and as the pus burrows downward the pressure on the nerves, distributed to the pubic and sacro-iliac region, causes radiating pains in the genitals and in the thigh. The thigh on the affected side is adducted and the flank and loin are retracted and arched above the bed. As the pus increases in amount it is usually palpable in the upper lumbar area, and the diagnosis is not difficult to make. Most of us find the *early stages* of a perinephric abscess the most difficult to differentiate from renal or other perirenal inflammations. There should be little difficulty in distinguishing an extra-renal suppuration from one which would afford positive evidences in the urine. As a rule the urine is negative in perirenal abscess, although in many instances the cortex and true capsule share to a certain extent in the inflammatory phenomena.

Of the multitude of extra-renal new growths, both of inflammatory and neoplastic character, it must suffice to merely mention the more important ones. They are: Rapidly developing adeno-carcinoma of the pancreas, colon or retro-peritoneal glands; sarcoma of the spleen or liver; spinal tuberculosis; abscess of the liver, gall-bladder or spleen; appendicular and sub-phrenic abscess; and, in women, abscess of the ovary and tubes. Any of these may either cause, complicate or be mistaken for a perinephric suppuration.

The *prognosis* is so grave in renal and in perirenal suppurations unrelieved by

operation that practically but one course is left for the surgeon, and that is to establish drainage by a nephrotomy as soon as the location, degree and character of the destructive change can be definitely determined.

In calculous pyelitis nephrotomy is the only remedy and no time should be lost in performing it. The case should not be permitted to reach a condition of pyonephrosis before the condition is relieved. Unfortunately, however, many that come to us have, either through ignorance or reluctance to follow the warnings of their family physician, delayed securing radical relief until nothing short of nephrotomy will meet the requirements. The sentiment of the present is strongly against primary nephrectomy in patients who have become profoundly depressed from long-standing septicemia. A sentiment equally strong prevails against the sacrifice of renal tissue in which there is the remotest probability of ultimate restitution. By a nephrotomy and drainage we may thus save the patient and afford an opportunity for restoration of the septic kidney, especially in those cases where the cortex and a reasonable portion of the medullary substance is not destroyed. There is abundant data at hand to show that primary nephrotomy and secondary nephrectomy have contributed in a very large degree to the lowering of the mortality in surgical kidney. There must always remain a class of cases, however, where practically total destruction of the renal substance has occurred and the true capsule alone confines the pus; in these cases immediate extirpation is the operation indicated. In most cases the lumbar incision is to be preferred. Between the oblique, curvilinear and straight lumbar incis-

ion there need be little choice. Edebohls prefers the latter, cutting from the twelfth rib directly along the external border of the erector spinae to the crest of the ilium and inward past the quadratus to the fatty capsule. This should be separated by the fingers and, by drawing the patient's body down over the pad until the latter engages against the last rib of the operated side, with a little manipulation the kidney will come up into the wound. In cases of prolonged chronic suppuration we usually find firm adhesions. These are frequently most extensive at the north pole, although from gravitation of the pus and the calculus, if there be one, the lower pole is thinner walled and more extensively eroded. In renal surgery, as elsewhere, the adhesions with contiguous structures make the operation tedious and formidable. The ascending vena cava and the hepatic flexure of the colon are important nearby structures, which must be avoided. The danger of opening into the thorax has been needlessly exaggerated by many authors. The same is true respecting the peritoneal cavity. When the kidney has been delivered on the back and examined critically, if nephrotomy be determined on, the organ may be incised through the dorsal convexity or occasionally through the pelvic wall, and the contents evacuated without necessarily soiling the wound. Hemorrhage from the cut parenchyma can be controlled by an assistant making compression over the vessels at the hilum. After the kidney is washed out thoroughly it is returned, the edges of the renal wound are stitched to the edges of the muscles with chromicised gut and the renal wound packed with a carefully applied gauze drain extend-

ing well into the pelvis. The upper angle of the lumbar incision may be brought together with sutures, leaving the lower angle free for drainage. Twenty-four hours later the gauze drain should be removed and a soft rubber drain inserted, packed about lightly with gauze. The external dressing will be the usual one of gauze and cotton, with a thick puff pad of oakum arranged on the bed underneath the draining wound.

Should a primary nephrectomy be determined upon, the vessels and ureter may be ligated separately with silk or forty-day cat gut, the lumbar wound wiped dry and closed with chromacised gut without drainage. No drain is necessary in a nephrectomy wound unless it has been accidentally infected. In that case a temporary gauze drain will suffice.

The treatment of perinephric abscess uncomplicated by renal suppuration is simple incision at the usual site, and washing out and gauze packing and drainage, as in any local abscess. Where the kidney is involved the complication must be met by nephrotomy in the usual manner.

Where extensive ramifications upward into the thorax, or downward towards the pelvis, exist, counter drainage may be necessary. In any case the indications will not be difficult to meet.

In conclusion, we may confidently look forward to an annually decreasing mortality in operated cases of surgical kidney. This will be accomplished by refinement of the means of diagnosis and the technique of operation. Duplay and Reclus (7), in a recent collaboration, have found the mortality in suppurative diseases of the kidney to be 13.3 per cent. for nephrotomy, and

37.5 per cent. for nephrectomy. Robert F. Weir (8) reported last year a resumé from his own practice showing 33 per cent. mortality in nephrectomy for abscess, and 28 per cent. for nephrectomy for all classes of renal lesions. His mortality per cent. for nephrotomy for septic cases is not given; for all classes of renal diseases it was 10 per cent. This mortality record shows a material reduction from statistics on renal surgery published in the journals two years previously.

I am convinced that not only will the mortality percentage be decidedly reduced each year in the renal diseases now classed as surgical, but that with a closer knowledge of the pathology of the various infections of the kidney, the *field* of surgical remedy will be materially widened and enlarged.

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The Colorado State Board of Health has been informed of the prevalence of smallpox in various parts of Utah. The health authorities in western Colorado have been notified to look out for any infection that may come over the line.

Certain Questions of Medical Ethics.*

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To a beginner in the practice of medicine it might seem that the ethics of our profession is very simple, and that in case of doubt nothing could be easier than to refer to the published code. The older practitioner will have learned that any written code, however great its value, can deal but imperfectly with such subtle questions as those of moral conduct and personal honor. He finds that he must refer many things to a higher court than any code; and if that higher court is not within himself, and he does not find there a law of life engraved in firmer characters than by any human hand, his attempt to be "ethical" will prove a failure. Assuredly every physician should be familiar with the code. But, after all, the bed rock of medical ethics is and always must be the personal character of the individual. The man who transgresses no written law may steal another's patient. A shrug of the shoulders, a tone of the voice, may be a cruel insult and be most bitterly and justly resented. If a man's own heart and character will not keep him from disloyalty to a colleague, nothing will. He will find no lack of opportunity even under protection of the code.

With this brief statement of my personal credo, I wish to call your attention to one or two considerations of professional conduct which may per-

haps be said to favor the defendant rather than the plaintiff. I have seen so much ill will among medical brethren because of fancied injury, that it seems to me well to discuss now and then the limitations of ethical conduct. As far as my own observation goes, there is often danger of too great sensitiveness rather than of too great freedom and lack of consideration.

The most frequent occurrence involving offense is the simple change of physicians on the part of a family or patient. Ought I or have I the right to feel offended because a friendly colleague has accepted a family, or even a particular case, which has been hitherto in my care? Assuredly not, unless—and here I would insert heavy italics—unless he has taken an unfair advantage, such, for example, as might result from some emergency or some unwarranted interference or comment. Under certain circumstances one may reasonably expect that before accepting such a case, an attempt will be made to ascertain the causes of dissatisfaction and possibly to correct a false conception or misunderstanding. Such an effort would certainly be a signal evidence of esteem and friendly consideration. But in the great majority of cases the attempt will prove wholly ineffectual. When a family has decided to change physicians all argument is generally useless. The

* President's address before the Denver and Arapahoe Medical Society.

fault lies usually with one's own personality, or in certain vague but yet real sources of dissatisfaction which are ineradicable. If we find that patients of ours have drifted into the hands of other physicians, we may as a rule ascribe it to some fault of our own rather than to the disloyalty of a colleague. Any unfriendly feeling under such conditions should be cause of shame.

When, however, we enter the field of consultation work and entrusted practice certain questions often arise which are much more delicate and more difficult of solution. It would be impossible to say too much or to speak too emphatically in regard to the scrupulousness with which such a trust should be observed. But let it be remembered that we are here considering almost wholly the side of the defendant, of the man against whom another has a grievance. And with this ever in view, let us ask in the first place the question: Is a physician, who has committed his practice to another during a period of absence, warranted in assuming that his clientele will be returned to him absolutely intact? Has he the right to demand that under no conceivable circumstances may one of his patients remain in the hands of the substitute after his return?

Personally, I do not hesitate to answer this question in the negative. While unquestionably the great majority of such cases should be at once transferred, even in the face of protest by the patients themselves, there are instances where such a transfer can be made only to the detriment of all parties concerned. Let us suppose, for instance, a case of diphtheria or appendicitis, which the attendant has

followed critically from hour to hour. The family and patient have learned to trust him implicitly; they watch for his coming, and all their hopes are centered in his skill and judgment. Not that this should too readily be taken for granted! Any man would fall far short of his duty who even under such conditions should not at once, upon the return of his colleague, express to the family his full desire and purpose to withdraw from the case. I would insist particularly that this should be done in no hesitating or half-hearted way, as if anticipating that the offer might not be accepted. But suppose the suggestion is received at once with an absolute and unequivocal refusal; that further honest insistence meets with an indignant protest. Might not such a family justly say: "What have we to do with your hair-splitting medical ethics? Our child is dangerously ill and you alone are familiar with his condition. If his chances in your hands are not better than in those of a stranger, then medicine is a sham science and its practice a farce." Assuredly such a point would be well taken, and in the presence possibly of death, it can hardly seem other than unworthy and even trifling to insist too strongly upon questions of ethics which the laity are only too apt to translate into terms of dollars and cents.

It seems clear that under such circumstances there is but once course to pursue. The whole matter should be fully presented to the former attendant, and he should then not only coincide with the view of the family, but he should lose none of his former confidence in the integrity and loyalty of his colleague. To insist on retaining such a case, or that it should be given

up, is to belittle the medical profession and to arouse just suspicion that our jealousies and bickerings are carried even to the bedside of the dying.

A still nicer question sometimes arises concerning the subsequent relations with a family which, like the above, for example, has been first seen through the kindness of another physician. Certainly the almost invariable rule should be that such a family is held only temporarily, in trust, so to speak, for the original attendant. It is not at all uncommon for the successful substitute to be again summoned at the very next illness which arises. Unquestionably in most cases such a call should be courteously but firmly refused. It is usually the result of no dissatisfaction with the former attendant, but rather of some slight prejudice or bias in favor of the new, and it is surprising with what readiness and good grace a courteous refusal is generally received. Let us rid ourselves of the notion that we are often indispensable.

But here again we may well ask whether there are not exceptions, and whether ill will has not frequently arisen because such were not taken into account. Let us suppose on the part of the family hardly more than a bare acquaintance with the first physician, resulting perhaps from trifling or infrequent service. The last attendant, on the other hand, has unavowedly made himself felt, either in some long illness or by his skillful response to some emergency. He is again summoned and his genuine and honest efforts to withdraw in favor of his colleague meet with emphatic protest. He can, of course, refuse outright to attend, but he sees plainly that trouble will ensue. A family will often refuse

to be led by the nose, and they are simply angered by further insistence. They see clearly the absurdity of expecting them to send for a relative stranger rather than for the man whom they have recently learned to know and admire. The chances are great that further insistence will simply disgust them with both physicians, and they will seek a third, convinced that Dr. A. is a man who holds on to his patients with a mercenary and titanic grasp. I believe that in such a case the interests of all parties and the demands of simple justice and honesty are best conserved by absolute openness. Dr. A. should be put in possession of all the facts, and his voluntary relinquishment of further rights should be accompanied by no feeling of bitterness or distrust.

For in what does a man's possession of any patient or family consist? Certainly not in any claim which we ourselves may be disposed to make or which other physicians may make for us. It can depend only upon the attitude of the patient himself; he alone can establish the claim and he can also dissolve it at will. We hold no title deeds to our families and patients. Our possession is only during good behavior, so to speak,—a purely moral relation which is established and maintained only by virtue of mutual confidence. A physician may regard a patient as his own just in proportion to the confidence and personal affection which he has been able to inspire. The duty of a confrere,—and it should also be his privilege,—lies in the genuine and hearty effort, under all circumstances and conditions, to uphold and confirm this relation. There should always be a tacit assumption of its existence; and the essence of medical ethics lies in the scrupulous and wholly

genuine observance of this rule, rather than in one's own subsequent attitude toward the family in question.

And this brings us finally to a still more important question of professional morality—the duty of a consultant. It would be impossible to emphasize too strongly the degree of friendly and courteous consideration—of self-abnegation, even—which should characterize his conduct. Very much might be said as to details, but here again the spirit is everything, the letter of but little worth. A man may know the code to the dotting of an *i*; he may even purpose to obey it implicitly, and yet, if he be naturally ungenerous or self-assertive, he will unconsciously transgress and become, it may be, the object of a lasting hatred. Again, even with the best and kindest intentions, it is possible for a consultant to be over-zealous and ultrascientific. Much depends, of course, on the circumstances and surroundings, as, for example, the attitude of the family, but, in general, a consultant should find out what he wants to know with few words and the least possibly display. His prime object should not be to impress the family; it should rather be, while showing due zeal and care, to inspire still greater confidence in the skill and trustworthiness of the regular physician. How easy it is for the consultant to at once occupy, in the mind of the family, a position of towering superiority! He comes with a certain prestige; he is perhaps widely known or has been selected with great care and deliberation. His every word or movement are watched by those who are often only too ready to make comparisons. It needs no more than a single *ex cathedra* utterance, or even a certain method of examination, to cast

utter discredit upon the skill and thoroughness of the regular attendant. With what care should such power be exercised, and how despicable it is to use the influence thus acquired for personal ends!

But, still pursuing the prime object of this address, we may here also enquire whether a physician may never, under any conceivable circumstances, attend a family into which he has been called as a consultant. The answer to this question is made with considerable diffidence, for fear of being misunderstood; but it would seem to me that here again there may be exceptions to the almost universal rule. Let me try to state a case in which I personally should insist upon such a course. I have, let us suppose, called in a consultant chosen by the family. They have known him long, personally perhaps, at least by reputation. Very likely he would have been their second choice as family physician. His conduct at the time of consultation is unexceptionable; and he does nothing either to discredit me or to curry favor for himself. Some months later, during which possibly my services have again been required, he is summoned. He refuses to go or at least demurs in my favor. He finds that it is not a matter of mere preference; that in some way I have incurred their displeasure; that they are dissatisfied and firmly resolved to make a change. Now, under these circumstances, if I were consulted, as I think I certainly ought to be, I should insist on Dr. A.'s acceptance of the case, and I should then feel that he ought to take it. He has done me no injury. The loss of that family has been not his fault but my misfortune, and I should prefer to see it fall into friendly hands.

Moreover, there is often this question of justice to be considered. Ought a physician to be forever debarred from attending a family, possibly of personal friends, because he has once visited it in consultation? While he should certainly make no such selfish use of the consultation itself, he ought not, in common justice, be compelled forever afterwards to forego such advantages as may have naturally resulted from reputation, neighborhood, or personal acquaintance.

In closing, let me again express the hope that the principles and purposes of this address may not be distorted or

misinterpreted. I have no desire to lower the bars of medical ethics; I would rather urge that there be a gate which may now and then be pushed wide open from within. Is there not a danger that we cultivate too highly the sense of possession, and that we sometimes allow ourselves to cherish feelings of bitterness towards our brethren which are unwarranted and unjust? I would plead again for a gentle and kindly spirit rather than an iron-bound rule; and for the utmost frankness and face-to-face explanation wherever there has arisen the slightest possibility of offense.

The Etiology of Acute Diffuse Pneumonia.*

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CLASSIFICATION.

Inasmuch as the consideration of the etiology of pneumonia is inseparably connected with its pathology, I shall first present the pathological classification which, to me, appears the most rational at the present time. We are, of course, familiar with the general classification of acute pneumonias into lobar and lobular or croupous and catarrhal, and I need not give their anatomical characteristics. We are also well aware that the terms lobar and croupous, and lobular and catarrhal, are not absolutely synonymous. While we have understood that as a general rule croupous pneumonia is lobar and lobar pneumonia croupous, and that catarrhal pneumonia is lobular and

lobular pneumonia catarrhal, we have also, of course, known that this is not a rule without exceptions. Catarrhal pneumonia may involve an entire lobe, and croupous pneumonia may involve less than a lobe or may even have a lobular distribution.

Recently attempts have been made to attain a more exact classification of the pneumonias, and some confusion has arisen as to the exact characterization of some of the members of this group. Thus Aufrecht, in volume XIV., I., of Nothnagel's *Specielle Pathologie und Therapie* (just appeared), gives the following classification of the acute diffuse affections of the lungs:

a. Croupous pneumonia.

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b. Catarrhal pneumonia (hitherto also called lobular pneumonia).

c. Atypical pneumonia (hitherto called infectious, bilious, or asthenic pneumonia, or pneumotyphus).

d. Hypostatic pneumonia.

e. Aspiration pneumonia.

f. Desquamative pneumonia.

g. Syphilitic pneumonia.

To this classification I shall devote considerable attention on account of the importance of the publication.

Disregarding the syphilitic affection, we see that he separates the atypical pneumonias from the croupous, and the hypostatic, aspiration and desquamative from the catarrhal, with which they have generally been classed. Now they certainly do present some different characteristics from the typical paradigms of croupous and catarrhal pneumonias; there are a number of different bacteria forming the etiological factors; but it is just to question whether they are anatomically essentially different or not. If they are, this classification is correct; if they are not, it is unjustifiable.

Some difficulty in arriving at a generally accepted classification seems to be due to the tendency on the part of some to exact a sharp differentiation between the different types of inflammation. That is, however, not always possible. Pathological processes overlap each other just as normal animal and vegetable varieties do. Therefore, in deciding upon a nomenclature, it is necessary to make use of the rule "*de potiori denominatio fit*"—the nomenclature is determined by the chief characteristics. For example, in an inflammation "escape of fluid on the surface of a mucous or serous membrane gives the picture of a serous catarrh. If the fluid is associated with marked

mucoid change of the superficial epithelium and of the mucous glands, there is a mucous catarrh. If a marked desquamation of the epithelium—with or without mucoid change—occurs, there is a desquamative catarrh, and it may occur not only in mucous membranes, but also in the respiratory parenchyma of the lungs, on serous surfaces, in the kidney tubules. If the deposition of fibrin, or coagulation, occurs in a liquid exudate there are formed fibrinous and sero-fibrinous exudates, which are also called croupous. They occur chiefly on the surface of serous or mucous membranes and in the lungs." (Ziegler.) Now these seem to be easily enough distinguishable one from the other, and they are, as a rule. However, we sometimes find more than one of these characteristics associated and we may experience some difficulty in the classification. Thus we know that the coagulating exudate is, par excellence, the characteristic of the so-called croupous pneumonia, and the non-coagulating exudate that of the catarrhal pneumonia in its various forms. Nevertheless we may find exquisite examples of coagulative exudate in pneumonias which we could not possibly designate as croupous and which, on account of the predominating characteristics, we must call catarrhal. (Orth.)

Aufrecht, in his description of the pathological anatomy of the atypical pneumonias, gives a description coinciding with that of the atypical croupous pneumonias of other authors. He says, however: "*The essential difference between this kind of lobar affection and the lobar affection in croupous pneumonia consists in the absence of fibrin in the alveolar spaces throughout the entire*

*course of the disease.*² The beginning of the process, however, is perfectly identical in both cases." Orth, in describing these same atypical cases of fibrinous lobar pneumonia, says: "There are cases in which the amount of fibrin in the exudate is relatively less, and also the distension of the alveoli does not reach the highest degree. These are found principally in the old and decrepit; occur, however, frequently in children in which, *as a rule, the fibrinous pneumonia is not found in so exquisitely typical anatomical forms as in adults.*"³ Fibrinous pneumonia is not always spread over large portions of the lung, but there are also very circumscribed, even lobular fibrino-pneumonic foci; these may also be multiple, as occurs in the so-called wandering pneumonia." Stengel says: "There are wide variations, however, for, on the one hand, typical fibrinous pneumonia may occasionally appear as a more or less lobular disease (particularly in influenza), and, on the other hand, the process may spread from one part of the lung to another (pneumonia migrans)." Ritter, in the report of a small epidemic of pneumonia, seven cases affected, three fatally, gives (according to Aufrecht) the following as the pathological condition in the fatal cases: "There was in one case grayish-red lobular hepatization of the lungs, in the second grayish-red sero-croupous hepatization of the lungs. In many places the macroscopical appearances corresponded rather with those of a catarrhal pneumonia, but nevertheless the microscopical examination showed, as in both the other cases, that it was a case of flaccid croupous pneumonia."

² Meaning strictly that caused by the Fraenkel-Weichselbaum pneumococcus.

³ Italics mine.

According to Leichtenstern, "all these atypical pneumonias are only varieties of the endemic-epidemic pneumonia." In prebacterial times, however, he regarded them as decidedly different and separate diseases.

In a similar manner Aufrecht, not finding in aspiration pneumonia, hypostatic pneumonia, and desquamative pneumonia certain of the anatomical characteristics, especially one which he finds in the typical catarrhal pneumonia of early life, excludes them entirely from the class of catarrhal pneumonias; this, too, notwithstanding the fact that one of them especially (the aspiration pneumonia) has been almost universally regarded as a typical form of catarrhal inflammation. He says that the "gross anatomical characteristics must be regarded as the sole cause for the identification of these two processes. In this, however, the differences in the etiological factors and, what is dependent thereon, the different classes of the individuals affected—catarrhal pneumonia generally affects children—also the difference in the course and outcome of the two affections, have been entirely overlooked." It is justifiable to remark, however, that the conception of catarrhal inflammation as such is absolutely independent of the etiological factors and the age or other characteristics of the individuals affected, but is just as entirely dependent upon the pathological anatomical characteristics, the characteristics of the exudate and its relations to the deeper tissues. Furthermore, dependent upon the characteristics of the exudate, whether serous, mucous, or desquamative catarrhal, there will be variations in the course and results of the different types, but one variety can not be re-

garded as more or less typical than the others.

For this reason one criterium, upon which he specially and absolutely insists, viz., "*an inflammatory hyperaemia, progressing even to hemorrhage of the capillary terminations of the arteries in the walls of the finest bronchial branches,*" may be quite typical and uniformly found in the one variety of catarrhal pneumonia, that of young children, as indicative of the severity of the bronchial participation in the inflammatory process; but its absence from the other varieties is not sufficient to exclude them from the general class, especially if they have the other characteristics of catarrhal inflammation. In other words, this one criterium may be diagnostic of the one particular variety of catarrhal pneumonia, but not of the class; just as the ruffle is characteristic of the jacobin pigeon, but we would hardly think of asserting that a bird could not be a pigeon if the ruffle were lacking.

Furthermore he gives as characteristics of catarrhal pneumonia: 1, the primary process, from which the rest is necessitated, occurs in the bronchi and extends from these to the surrounding tissues, the alveoli, which are secondarily involved; 2, the inflammation reaches the inner surface from without.⁴ These he does not find in aspiration pneumonia. His own description of the histological conditions, however, carries the earmarks of a catarrhal inflammation. In a case of aspiration pneumonia he found the alveoli almost completely filled with cellular elements corresponding to the alveolar epithelium. The nuclei were usually

not visible, when visible did not stain. Occasionally two or three nuclei were present in the cell. Fibrin was only scantily present in the alveoli. The alveolar capillaries were generally considerably hyperaemic. In another case of cerebral injury and the aspiration of water he found on microscopical examination large groups of alveoli completely filled with white blood corpuscles, among which red blood corpuscles were scattered. The interalveolar capillaries were distended with blood. The alveoli surrounding these groups contained almost exclusively red blood corpuscles. Only scattering remains of alveolar epithelium were visible. In a case of aspiration pneumonia from carbolic acid poisoning there was in the left lung a great number of small infiltrative foci in which a central and two surrounding zones could always be distinguished. The central zone included two to twenty alveoli. They were completely filled with white blood corpuscles. If epithelial cells were present they were anuclear. In many the changes were further advanced. Leucocytes were no longer distinguishable, but the whole was transformed into a structureless, coagulated mass and was separated from the middle zone. In the latter the alveoli were also filled, but chiefly with red blood corpuscles between which there were epithelial cells. White blood corpuscles were sparse. In the outer zone the alveoli contained fibrin, enclosing in its network swollen alveolar epithelium.

All these present certain common characteristics. There was inflammation having its seat in alveoli about isolated bronchioles. The tissues were affected in different degrees of severity. In the mildest degree there was inflam-

⁴While these are very universally true, they are not accepted by pathologists as absolute criteria.

matory hyperaemia with superficial epithelial desquamation. In the next degree there was inflammatory hyperaemia with superficial epithelial desquamation and purulent catarrhal exudate.⁵ In the severest cases the central portion is necrotic, having been directly destroyed by the morbid agent,⁶ but it is surrounded by the same inter-alveolar hyperaemia, epithelial desquamation and purulent catarrhal exudate. Further out, where the morbid agent acts less intensely chemotactically, there is a fibrinous exudate. It is simply to be remembered that in a purulent catarrhal exudate, although it is highly albuminous, spontaneous coagulation is prevented by the presence of the large number of leucocytes.

As regards hypostatic pneumonia he speaks as follows: "As regards its pathogenetic relationship the disease has its origin in an insufficiency in function of the vessels, or rather the vessel walls, which results in a stagnation of the blood, the injurious effects of which must be produced in the deepest part of the lungs. *The consequence of this stagnation is an insufficient nutrition of the pulmonary tissue, primarily the alveolar epithelium*, in which the nutritional disturbance results in a necrobiotic process. If this is brought about rapidly there results simply a de-

struction of the epithelium by a coagulation necrosis; if the process occurs more slowly an inflammatory irritation is exerted by the epithelium on the vessels and the exudation of blood corpuscles as well as fibrin, also in smaller foci the exudation of leucocytes, follows.⁷ *Therefore in hypostatic pneumonia the process is not to be regarded as an essentially inflammatory one.* It is only later, when, the nutritional disturbance being not too far advanced in the alveolar epithelium, these exert an irritation in the alveolar walls, especially the alveolar capillaries, that inflammatory changes occur which correspond with those of croupous pneumonia, but far inferior in intensity and extent." It is true that not every hypostatic congestion becomes a hypostatic inflammation, just as it is true that not every active hyperaemia becomes an inflammation, but such cases are not under consideration.

As regards the inflammatory nature of the process, that is a matter of opinion depending on one's conception as to what inflammation is. Ziegler's definition, which is now probably the most generally accepted, is that "Inflammation is essentially a local tissue degeneration combined with pathological exudations from the blood-vessels, caused by some injurious agency, with which are associated, sometimes earlier, sometimes later, tissue proliferations leading to regeneration or hypertrophy." He further says, "Moreover, substances that excite inflammation can develop in the organism even without the aid of parasites; for example, if tissues die in large mass from any cause."

⁵ "It is much more probable that the inflammatory circulatory disturbance is a result of the primary tissue lesion. Therefore necrosis and inflammation are often found alongside each other, corresponding to the different degrees of the injurious influence (e. g., a corrosion). From this there now result all gradations in the degree of the inflammatory injury." (Birch-Hirschfeld.)

⁶ "The necrosis of the tissue may appear immediately, as the first effect of the injurious action, while the inflammatory exudation only takes place later, and is confined to the region adjoining the necrosis, and this occurs especially after the action of caustic substances, after exposure to a high temperature, and in ischaemia." (Ziegler.)

⁷ It must be remembered that bacteria are not to be entirely excluded from all etiological relationship with hypostatic pneumonia.

As regards the croupous or catarrhal nature of the process, "This form of catarrhal pneumonia occurs most frequently in hypostatic pulmonary tissue. The broncho-pneumonic character of the affection is less outspoken; more frequently extensive infiltrations occur which present mixed forms of catarrhal and fibrinous pneumonia." (Orth.) Ziegler says that "Broncho-pneumonias occur extraordinarily frequently in portions of the lungs which, toward the end of life, are the seat of stagnation or hypostatic hyperaemia and a haemorrhagic stagnation oedema."

Desquamative pneumonia has long been dignified with special descriptions

in the text-books, being quite generally recognized, however, as a variety of catarrhal pneumonia.

From the foregoing, not regarding the syphilitic pneumonia, I should, at the present day, prefer to classify the acute diffuse pneumonias as follows:

1. Croupous pneumonia.
 - a. Typical.
 - b. Atypical.
2. Catarrhal pneumonia.
 - a. Typical.
 - b. Hypostatic.
 - c. Aspiration.
 - d. Desquamative.

[To be continued.]

Clinical Report.*

(1) **Contusion of the Eye-ball with Rupture of the Iris and Choroid—Recovery of Normal Vision.**

(2) **Dermoid Tumor of the Orbit.**

By E. W. STEVENS, M. D., DENVER, COLORADO.

CASE NO. 1.

The first case is that of a car inspector, aged thirty-nine years, whom I first saw on December 31, 1898, in consultation with Dr. George Roehrig, of this city.

Four days previously, an iron bolt which he was attempting to drive rebounded, striking the left eye. The bolt was fifteen inches long and weighed one pound.

A lacerated wound, about twenty millimeters long, extended completely through the middle of the left upper lid, parallel with the supra-orbital ridge. There was a large sub-conjunc-

tival hemorrhage, and an abrasion of nearly the whole upper half of the corneal epithelium.

The pupil was dilated to about six millimeters and did not react to light or convergence. No mydriatic had been used. A rupture of the iris extended from the lower inner pupillary margin downwards and inwards about half way to the periphery. The anterior chamber was of normal depth and contained a small amount of blood undergoing absorption.

The vision in the injured eye was equal to the counting of fingers at twelve inches in the upper half of the

*Read before the Denver and Arapahoe Medical Society.

field, while in the lower half it was limited to qualitative light perception. The vision in the fellow eye was 4-6. The tension was normal. No details of the fundus of the injured eye could be seen with the ophthalmoscope. The light field was carefully taken, and while found to be generally somewhat contracted, there was no other defect. This was deemed sufficient evidence to exclude detachment of the retina. The caloptric test revealed the presence of the lens, and it was adjudged to be in normal position.

The patient had very properly been kept in bed, and cold compresses applied to the eyes. The wound of the lid had been closed by sutures. At my first visit, after washing out the conjunctival sac with a solution of boracic acid, atropin was instilled and a bandage applied.

The next day the anterior chamber was completely filled with blood, the result of a secondary hemorrhage from the iris. This blood was rapidly absorbed, but, owing to blood-staining of the cornea, it was impossible to see the details of the fundus until fourteen days after the hemorrhage occurred. The ophthalmoscope then revealed a slight opacity at the posterior pole of the lens. The vitreous was clear. A crescent-shaped rupture of the choroid began about three disc diameters above the optic nerve and extended outwards and downwards beyond the macula, with which it was in close proximity. The margins of the rupture exhibited beginning degenerative changes.

The vision at this time was 1-60, and the eye free from irritation.

The further progress of the case was uneventful, the patient following his occupation and occasionally reporting at my office, with constantly improving

vision. On February 10, 1899, six weeks after the injury, the vision in each eye, after the correction of a low hypermetropia, was 4-5.

The treatment of this case was exceedingly simple, and consisted of the continuous use of atropine and a pressure bandage until the eye was comparatively free from injection. At the beginning of the second week iodide of soda was prescribed in ten-grain doses, three times daily (hoping to promote the absorption of any hemorrhage into the vitreous), and continued for about ten days.

CASE NO. 2.

On August 24, 1899, Edith T., aged eight years, was brought to me by Dr. George W. Miel, of this city, with the following history: When one year old her parents first noticed a small tumor between the left eye and the nose. The growth had slowly increased in size to the present time.

On examination of the patient a tumor about the size of a walnut presented itself at the inner margin of the left orbit, being partly within and partly without the orbit. The growth appeared to be freely movable under the skin. There was slight limitation of movement of the left eye inward. The vision in each eye was 4-5 and both eyes were normal in all respects. The diagnosis of a probable dermoid cyst of the orbit was made, and its removal advised. On August 25, with the assistance of Dr. Miel, the growth was removed under chloroform anaesthesia. The cyst was found to be attached very closely to the periosteum of the inner wall of the orbit, and in attempting to separate this attachment the sac was unfortunately ruptured. A rather free arterial hemorrhage was also encoun-

tered, notwithstanding a dry dissector was used. By grasping the cyst wall with forceps, and careful dissection, it was freed from its attachments, which extended to nearly one-half of the depth of the orbit. The wound healed without suppuration, and there is no limitation of the movements of the eye.

The cyst wall was not examined microscopically. The contents of the cyst were made up of the turbid, smeary material characteristic of dermoid cysts of the orbit.

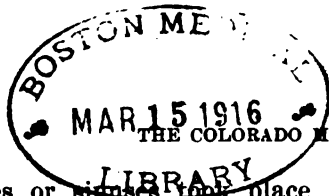
Next to the ovary, the orbit is the most frequent site of dermoid tumors. It is the generally accepted view among pathologists that, with the exception of meningocele, parasitic cysts, and of serous cysts having their origin in the tendon of the superior oblique muscle, all cysts of the orbit, including the so-called extravasation and retention cysts, are true dermoid cysts. (Bull.)

While in the early text-books of medicine and surgery instances of the occurrence of dermoid tumors are mentioned, there seems to have been very little attention given to them until the time of Blumenback (1785), who rejected the popular belief that they were punishments inflicted by God upon those who had been guilty of moral errors. Baellic also helped to refute this old idea by the discovery of an ovarian dermoid, containing skin, hair and bone, in a little girl twelve years of age who was a virgin, though he fell into the error of believing that the genital organs of the female were able in themselves of generating and developing an embryo. A few years later Tumiati wrote upon dermoids and regarded their formation as analogous to the double monsters. A little later Meckel, in an interesting paper, concluded that

these tumors could originate from (1) conditions akin to pregnancy; (2) double monsters; (3) the change of normal tissue into tissue of another kind by irritation. In 1854 Remak advanced the theory that these tumors were congenital and occurred at positions in which foetal clefts, fissures or sinuses had previously existed. (McFarland.)

A dermoid tumor is one that contains mucous membrane or skin, the latter being furnished with its various appendages. Although generally cystic, it is not unlikely that they originate as solid growths and subsequently become cystic by the retention of sebaceous matter, the secretion of sweat-glands, and the accumulation of exfoliated epithelium. The skin does not cover the whole interior of the cyst, but usually in patches scattered upon the cyst wall. This skin is generally furnished with an excessive number of sebaceous glands of large size. Sweat-glands occur, but are less common. Typical hair follicles are often present and bear hairs similar to those normal to the animal. In the sheep, dermoids contain wool, and, according to Sutton, dermoids occurring in birds contain feathers. Bone is not infrequently present in these cysts. It is situated beneath the skin lining the sac. Sometimes the bone is mandibular and contains sockets from which teeth project through the epithelial covering into the cavity.

Before the time of Remak's paper, it was remarked that dermoid tumors occurred in the ovary and orbit with great frequency, but that certain other parts of the body were seats of predilection does not seem to have been observed. Remak pointed out that they occurred by preference at positions in which the union of foetal



clefts, fissures or sinuses took place during embryonic life, and at which the skin could be included in the process of coalescence. Continued observations upon these tumors have disclosed the fact that this is in great part true. We find them in the great median fissures of the body, both anteriorly and posteriorly, in the mandibular fissure, orbital and naso-orbital fissures, branchial cleft, in connection with sutures of the brain case and the rhino-pharynx. The fact, however, that they occur with great frequency in the ovary is opposed to the theory of Remak.

In classifying dermoid tumors, Sutton mentions four genera: 1. Sequestration dermoids. 2. Tubulo-dermoids. 3. Ovarian dermoids. 4. Dermoid patches (moles). Sequestration dermoids arise in detached or sequestered portions of the surface epithelium, mainly in situations where, during embryonic life, coalescence takes place between skin-covered surfaces, as was first pointed out by Remak. It has long been recognized that dermoids do not occur in the limbs, yet occasionally small skin-lined cysts are met with in the skin of the hand and fingers. It has been demonstrated that these cysts are the results of injury, such as pricks and cuts, whereby fragments of the skin have been carried into the subcutaneous tissue, and subsequently give rise to skin-lined cysts. These are called implantation cysts, from the manner of their origin. They may attain the size of a bantam's egg, and occur not only in the limbs, but also on the trunk, face and scalp. Very many examples have been recorded in the cornea and iris, as the result of punctured wounds, as well as the conse-

quence of operations such as iridectomy and cataract extraction. These cysts prove that sequestered portions of skin may act as tumor germs.

2. Tubulo-dermoids are formed by the persistence of certain canals and passages which normally disappear before birth. These are known as obsolete canals. They are the thyroglossal duct, the branchial clefts and the post anal gut. Tumors occurring here are, of course, congenital, though they may not increase in size sufficiently to be recognized until late in life. These tumors often attain very large proportions.

In classifying dermoid tumors, Sutton mentions these two classes, sequestration and tubulo-dermoids, and then proceeds to describe those found in the ovary as ovarian dermoids. This arrangement makes his classification lack homogeneity, but is at present the only one possible, as complete ignorance exists as to the pathogenesis or cause of dermoid tumors of the ovary.

Dermoid tumors of the orbit occur most frequently at the outer angle of the brow, being rarely met with at the inner angle. To the touch they feel firm, smooth and rounded, and they roll beneath the finger on the bone. They are to be differentiated from meningoceles, encephaloceles and parasitic cysts (cysticercus and echinococci). The meningoceles and encephaloceles are extremely rare, and are distinguished by their bilateral character and their pulsation. They are always congenital, and most of the little patients die within the first few weeks or months after birth. Parasitic cysts are also very rare, and are painful. In case of the echinococcus cyst severe ciliary neuralgia is always present.

When deeply seated, the diagnosis of the dermoid tumors of the orbit is not always possible before removal.

The treatment of these tumors should be surgical. Some authors recommend incision with subsequent cau-

terization of the sac, and still others have advised partial excision. The only operation which promises a satisfactory result, however, is that of total extirpation of the cyst under the most complete aseptic precautions.

SELECTED ARTICLES.

The Medical Journal and the Advertiser.

The medical journal and the various purveyors to the medical profession are mutually dependent; neither can afford to do without the other. No medical journal can exist on the income of its subscription list; it must have a certain amount of paid advertising. No manufacturer whose products are intended for physicians' use can hope for a profitable business, unless he makes his wares known to the profession through the medium of the medical journal. The relations, then, between the advertiser and the medical journal should be cordial and close; they should also be business-like, and above all—they should be honest. There are many kinds of medical journals, and there are many kinds of advertisers, but for convenience we may divide them both into two classes, the honest and the dishonest. The honest medical journal puts a certain price upon its advertising space and sells this space for this price to any reputable manufacturer or dealer. The honest medical journal divides its space into a certain number of pages of scientific reading matter and a certain number of advertising pages, and these two sets of pages are kept abso-

lutely separate, neither being allowed to encroach upon the other; so that the reader knows at a glance when he is reading the honest views of the editor, the collaborator, or the original contributor, and when he is reading an advertisement. The honest advertiser, if he is at the same time a sensible one, appreciates the value of advertising space in the honest journal and puts what he has to say, concerning what he has to sell, in the space he has bought and paid for, and neither asks for or expects anything further. Granted that the above standard of honesty is correct, it will doubtless be a surprise to learn that there are not a dozen honest medical journals published in the United States to-day. Any person doubting this statement can find ample confirmation of it in a half-hour's perusal of the journal files in our library. It would take too long to enumerate the many forms of journalistic dishonesty which are stamped upon the pages of so many of our exchanges, but we will take the time to call attention to a few of the more conspicuous of them. In the first place there is the so-called "Publisher's Department," which contains clippings

from other journals of its own class, concerning the wonderful results following the use of some of the articles which are described in the journal's advertising pages. This is, perhaps, the least dishonest (if we can qualify the word) because the nature of the reading matter is so apparent. Next comes the department headed "Clinical and Therapeutic Reports," which are invariably found to consist of the reports of cases which have been cured by the use of some preparation elsewhere advertised. More insidious than the above is the "Reading Notice," which is found here and there throughout the journal in odd places, and which is usually so expressed that it appears to represent the editor's opinion concerning some special article which will always be found described in full in the advertising pages. Then there is the "Editorial Puff," which is an outspoken editorial expression concerning some advertised article. (This is said to be very expensive.) Lastly, there is the "Original Article," which some one has been hired to write, and which is speedily sent in the form of reprints to every publication in the country. We were somewhat amazed only a few weeks ago to read an article from the pen of a well-known medical teacher and author, on the pages of one of the most widely read New York weekly journals, extolling the virtues of a certain brand of Lithia Water. This article has since appeared in numerous other medical journals, and the reprints will doubtless soon reach us. We could not help wondering how much the distinguished gentleman was paid for writing the article and how much the journal was paid for publishing it. We have been approached (and we have the letters on file) by many of

the larger advertisers concerning the various schemes mentioned above, and we have before us at the present time an advertising contract recently received from a well-known New York chemical company, at the bottom of which appears the following: "Contract to become valid upon publication of an original article on '————' with report of cases."

It is needless to say that this contract, which is similar to many others we have received, has not been, and will not be signed by us. Whether this particular kind of bribery had its origin with the unscrupulous, dishonest medical journal, or whether the original sin came from the advertiser, we are not prepared to say; indeed, it matters little. The Philadelphia Medical Journal of September 16, 1899, publishes a copy of a letter, which is addressed to advertisers by the editor (or business manager, it is not stated which) of a medical journal, which is a good sample of the rottenness of this kind of journalism, and we can not help wondering whether it is not just a little too rotten for any one to bite at.

There are manufacturers, we are glad to say, who are intelligent enough to realize that such methods as we have alluded to are not only dishonest, but they do not pay. As soon as physicians begin to find that they are "buncoed" by paid-for reading notices and editorial endorsements, they not only fight shy of the journal which deceives them, but they become suspicious of the articles which are advertised in this sneaking, underhanded manner.

The cure for this evil state of things is simple and radical. If every medical man, who has at heart the interest and honor of his profession, would re-

fuse to support dishonest medical journalism, it would soon die. There are a few honest journals which are conducted by non-medical publishers, and there a few dishonest journals which are conducted entirely by medical men, but the journal which is owned, edited and published by physicians, and

whose business management is entirely unconnected with any publisher or manufacturer, is the journal which should be supported by the profession, for it is the only journal which can be said to belong to the profession.—St. Paul Medical Journal for November, 1899.

On the Free Use of Drinking Water in Acute Hemorrhage.

BY LOUIS KOLIPINSKI, M. D., WASHINGTON, D. C.

The prime indication in the treatment of acute hemorrhage, after the temporary or permanent closure of the bleeding vessels, is to refill the vascular system with its normal fluid without delay. The self-evident and routine treatment in surgical, medical and obstetrical cases is to introduce a certain volume of liquid, natural or artificial, into an opened vein, into the subcutaneous cellular tissue or into the peritoneal sac. The results, as is well known, are speedily apparent and often most happy. To carry out successfully and without future harm to the subject, the operative treatment necessary, it is essential that the proper instruments are at hand and in working order, that everything brought in contact with the site of operation is aseptic or sterile, and that time, circumstance and assistance are available. In daily practice, however, it is impossible on all occasions to command these requisites, and in not a few instances one may be compelled to rely upon some substitute method.

A plan which is so simple that it may be overlooked, so obvious that to commend it seems unnecessary, and yet so effective as to yield a brilliant

result, is the very liberal exhibition of drinking water.

It must be given almost continuously until the bloodless victim begins to revive and react. Prerequisites are the absence of vomiting and, if a stomach tube is not at hand, that the patient is able to swallow. In romance the wounded always cry for water, and sentiment and humane feeling are awakened when they are offered drink. In reality, at the bedside we do not hear such cries, but it is astonishing to see to what an extent a liberal supply of water can be pushed, and with it is apparent a return of strength and mental activity, slowing and deepening of the respiration, and the restoration of volume, and tension to a pulse that before could not be felt.

I record as an example of this treatment the following case:

A girl of eighteen, of good constitution and of healthy parentage, developed typhoid fever, for which, in the beginning, she received no medical treatment. She was compelled to keep her bed on the eighth day, and was examined for the first time on the twelfth. Her average morning and evening temperature for the succeed-

ing seven days was 104° F. The family opposed hydrotherapy. During this time her intellect was clear, her manner composed, and her nights not very disturbed. The pulse varied from 96 to 112 beats per minute.

At 3 in the afternoon of the twentieth day there occurred a copious alvine evacuation, and at the close of the act a blood clot the size of a walnut passed. There was no abdominal pain or tenderness, and the temperature remained high as usual. At 10 o'clock at night of the same day she was seized with an uncontrollable desire to defecate, which returned at short intervals for more than half an hour, and was accompanied by an audible gurgling sound.

When visited at 11 p. m. the patient was conscious, with a tendency to grow drowsy and to faint. She was anxious, but not restless. The body was exsanguinated, the skin cold and clammy, the breathing deep and hurried, the pulse hardly to be felt at the wrist and uncountable. The bed was literally drenched in blood, the pool extending to her feet.

The situation was somewhat trying, and an unfavorable prognosis justified. The sick girl was at her home in the suburbs of the city; skilled assistance and instruments not obtainable without great sacrifice of time. Under these circumstances she was given a hypodermic injection of strychnia and atropia, and the antero-lateral surfaces of the trunk from the clavicles to the groins covered with a thick cold poultice after the manner of Dr. Bedford Brown. These poultices were reapplied every half hour.

The patient was asked if she was thirsty, and, replying in the affirma-

tive, was given a tumbler of water, which she drank with effort and delay. The quantity was repeated every five minutes until she had emptied four glasses. Through the remainder of the night she was constantly plied in the same manner by a couple of neighborly women, until they had given her by actual count twenty-four tumblers of water. The next morning there had been no recurrence of the hemorrhage, the girl had revived completely, and her radial pulse was strong at 108 beats per minute.

The cold-poultice treatment was continued for three days, during which time the bowels did not move. Later there occurred spontaneous evacuations of the usual yellow-white color incident to a milk diet.

The temperature during these days was moderate, and then began rapidly to mount again to 104° F. and more. A single wet pack of thirty minutes' duration reduced it permanently.—*Maryland Medical Journal.*

JANUARY MORTALITY.

The January records of mortality in Denver show 218 deaths, 19 less than for the same month of 1899. The percentage per thousand was 15.36, and 12.84 exclusive of tuberculosis contracted elsewhere. There were 28 cases of diphtheria and 64 of scarlet fever and 6 cases of smallpox. Notwithstanding the mild, pleasant weather that prevailed and which is conducive to ill health, the statistics show that the month withal was healthier than the January of 1899, when the weather was more severe than for twenty-nine years.

A Case of Patent Meckel's Diverticulum.*

By R. ABRAHAMS, M. D.

District Physician to the Mt. Sinai Hospital; Attending Physician to the Skin and Genito-Urinary Department.
East Side Dispensary, New York.

B. R., a female infant, 7 weeks old. I saw her for the first time when she was 7 days old. She was born at full term and weighed about 8 pounds. There was nothing unusual about her birth. The attending midwife ligated the cord in the ordinary manner, leaving a stump about two and a half inches long. During the first week of the baby's life the mother as well as the midwife noticed that every time the baby cried the cord became inflated at its distal end, while the proximal end had the feel of a sausage.

On the seventh day they both observed an oozing of blood from underneath the shriveled and easily detachable cord. On examination it was found that the cord was completely atrophied, but yet slightly attached to the umbilicus. It soon fell off, however. Protruding from the umbilicus was an elongated mass, one and a half inches long and half an inch in circumference. The upper surface of the protrusion presented a fine aperture in the centre. The appearance of the mass was like that of a highly congested mucous membrane, and bled at the slightest touch. It doubled in size when the baby cried lustily. Bubbles of air were seen to come from it at the same time. A thin probe was passed into the opening; the probe went into the abdominal cavity, and upon withdrawal traces of feces were seen on the tip. A few days later small particles

of fecal matter and large gusts of flatus escaped through the opening of the tumor. The base of the navel was healthy; its edges tightly hugged the protrusion so as to form a constriction around it.

Aside from this anomaly there was nothing wrong about the child. She nursed very well, her bowels moved regularly and by the natural route.

During the six weeks of observation I noticed that the mass was tending to become smaller in size and more constricted at its base. Its surface looked healthier, and ordinary manipulation did not provoke bleeding. Wind and streaks of feces, however, passed as before.

The appearance and the location of the lesion readily suggested the diagnosis of patent Meckel's diverticulum.

The treatment consisted in ligating the tumor with silk, excision and cauterization of the stump with silver caustic. The ligature was done as deep in the umbilical depression as was possible. The stump was cauterized twice, once immediately after removal of the mass, and the second time three days after. The result is most satisfactory. I saw the child four months after treatment, and found perfect closure of the diverticulum. In fact, there was and is absolutely no trace or sign of any abnormal condition having previously existed in or around the umbilicus. The latter looks healthy and perfectly normal. No um-

*Presented to the New York County Medical Association, June, 1899.

bilical hernia or any tendency in that direction is noticeable. The infant thrives splendidly.

My friend, Dr. F. S. Mandelbaum, pathologist to the Mt. Sinai Hospital, kindly examined the specimen and reported as follows: "The sections are perfectly round in outline and contain in the center a small opening. The entire circumference and also the opening in the center are lined with perfectly normal intestinal mucosa, with

healthy secreting glands. The portion between the center and the periphery is made up of circular and longitudinal muscular fibers and connective tissue, containing numerous small blood vessels. In other words, the section is one of intestine. The mucous membrane had bulged outward at the umbilicus, and hence we find mucosa both encircling the tumor and lining its central opening."—Pediatrics.

Bulletin of the Colorado Medical Library Association.

Devoted to the interests of Medical Libraries in the West.

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No. 17. FEBRUARY, 1900.

The Medical Department has been in a sort of chrysalis state for several months, but now that we are getting things somewhat out of the chaotic condition they have been in, we hope to keep the work running along smoothly.

Owing to the fact that there is no especial room for the medical library, it is impossible to keep track of the visitors to this department, as we used to do in the High School building.

About the last of November sixty volumes of current medical journals were sent to the bindery. These have just come back and will be put in place on the shelves very soon. Twenty more volumes are now ready to be bound and will be sent in a day

or two. A number of new medical books have been acquired, and are only awaiting cataloguing before they are put into circulation.

The current medical journals, donated by the various doctors, have been coming regularly and are placed in the pigeon holes for use in the library as soon as possible.

By the way, there is a case full of duplicate journals here, and any one who cares to come and look over them is welcome to as many as he wants to carry away.

We hope that the students and physicians will try to make themselves feel at home in the new library, even if they have not an especial department.

ZOE GUERNSEY.

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No. 2.

EDITORIALS.

OUR FUTURE POLICY.

No man's place can be exactly taken by another. He has an individuality which belongs to himself alone, and which cannot be assumed by some one else. When he is no longer able to carry on his life work there will be some one found to take it up; but its method of accomplishment, and consequently, in a measure, the work itself, will be different.

So, too, when the editorial management of a journal changes, its individuality is also changed. It is impossible for it to remain the same. Therefore it is no more than right that, in assuming the conduct of The Colorado Med-

ical Journal, I should outline to its subscribers and the medical public, to which the Journal appeals for support, what is proposed as its future course of conduct, and what it hopes to accomplish.

In October, 1897, the first number of The Western Medical and Surgical Gazette appeared, with Dr. Lincoln Mussey and myself as editors, and Mr. W. H. Sharpley as business manager. We then expressed a desire to modestly work for the best interests of the medical profession of the Rocky Mountain region, and produce a journal which would be creditable to it and ourselves. Under the liberal policy of Mr. Sharp-

ley we were, for a time, able to carry out our desire. Then Dr. Mussey's health failed. The last number of the Gazette in which he was actively interested was that for May, 1898. Then Mr. Sharpley, having taken his degree and being desirous of turning his energies into other directions, disposed of his interests in the Gazette as business manager to another. The liberal policy of the management was immediately changed, and very soon irreconcilable differences between the editorial and business departments arose, as regards questions of business honor and integrity, and the standard which should be maintained for the Gazette as a scientific publication. As the result of these differences suspension of publication was determined upon, and the manuscript for the number for November, 1898, was withdrawn from the hands of the printer.

Steps were being taken looking toward a resumption of publication of the Gazette under my direction as regards both the editorial and business policies, when the death of Dr. Axtell made it seem that something better could be done than the publication of another journal in this field. Accordingly negotiations were undertaken and successfully concluded by which The Colorado Medical Journal has passed into my control.

Like the Gazette, The Colorado Medical Journal has always worked for the upbuilding of the medical profession in these Western states. Its word has always been spoken for the advancement of medical education and the promotion of the public health. It has not failed in its attempt to promote feelings of fraternity among our physicians. It has not been a party to partisan strife. Its columns have never

been open to unpleasant personalities, while many a cheering and approving commendation has appeared therein.

Its pages have been free from the commercial character by which some of its confreres have not been untainted. It has not placed before its readers "original clinical reports," the sole commendation of which was the demand for publication made in advertising contracts, but it has brought forward monthly the best thought of our medical men uninfluenced by sordid interests.

Dr. Axtell's personality died with him. No other need expect or hope to be able to assume it and present it to his fellow men, and in so far as that was mirrored in The Journal will a change make itself manifest. But I shall continue to endeavor to carry out in the future the policy for good which in the past has characterized both The Colorado Medical Journal and the Western Medical and Surgical Gazette, and it seems to be not unfit to link the two names together.

An earnest endeavor will be made to avoid all tendency to partisanship, either as regards local medical institutions or local medical political factions. No barriers will be raised between The Journal and them except such as they may themselves erect. Equal cordiality will be exhibited and equal friendship manifested so far as permitted.

With the foregoing exposition of principles The Colorado Medical Journal appeals to the entire medical profession for its undivided support and aid in the advancement of the higher medical interests of the Rocky mountain region.

WM. N. BEGGS.

THE COLORADO STATE MEDICAL SOCIETY.

The executive committee is actively at work. It expects to make the next meeting the red-letter meeting of the society's existence. The addresses on medicine and surgery will be specially attractive. Special efforts will be made to have papers of unusual interest contributed. New forms of entertainment will be provided.

One of the most attractive features of the annual meetings of the Pennsylvania Medical Society is the pathological exhibit, which is contributed to by the members of the profession throughout the state and arranged by the committee on pathology. At the coming meeting of the Colorado State Medical Society a laboratory exhibit of somewhat wider scope is being arranged for. A committee to have it in charge has been organized as follows:

Bacteriology—W. C. Mitchell.

Chemistry—Philip Hillkowitz.

Haematology—A. M. Holmes.

Pathology—Wm. N. Beggs.

X-Ray and Skiagraphy—Geo. H. Stover.

An abundance of apparatus—microscopes, specimens (normal and pathological, gross and microscopical), photographs, microphotographs, skiagraphs, etc.—will be properly displayed, and members of the committee will be in attendance to make the exhibit both entertaining and instructive.

In the department of pathology, especially, it is hoped that the physicians throughout the state will contribute largely. Interesting specimens, either wet or dry, and photographs of interesting cases will be gladly received, taken care of and labeled, and proper credit will be given. The members of

the committee invite correspondence on the subjects under their direct supervision, and will gladly receive suggestions which will conduce to the greater interest and success of the exhibit.

VACCINATION.

What with the activity of our anti-vaccination friends throughout the country and the prevalence of small-pox in some portions of the Rocky Mountain states, it is not out of place to urge intelligent and concerted action on the part of the members of the profession. The poor we have always with us. So, too, we have those who are incapable of logical reasoning; who can not see that two plus two always make four, but do their sums in addition on a bias. These do not (I do not like to say will not) see what the great consensus of medical experience has shown to be as well established as that arsenic and strychnine are poisons, viz., that vaccination is the almost absolutely certain preventive of small-pox, and the absence of the great epidemics of variola is the result of general vaccination.

In locations in which there is any considerable percentage of such people, physicians have a two-fold duty—to educate the people as to the harmlessness and efficacy of vaccination, and to afford those who become vaccinated certain protection by the use of suitable virus and suitable technique. The former is a difficult and arduous task. The latter is not so bad. Good virus may be obtained readily, and this is no place to extol the products of any individual laboratory. A few words may be allowed as to the technique.

In these aseptic days there is some danger of the object of vaccination being defeated by too great efforts at rendering the site of operation aseptic and preventing contamination of the dressing. For obvious reasons non-volatile antiseptics, if applied to the skin and not thoroughly removed, may prevent the "taking" of the vaccination. It is better to use simple soap and water thoroughly, followed by alcohol. Then, in scarifying the skin, care should be taken to draw as little blood as possible. The virus can, and should, be applied thoroughly without this. One method, which has been recommended, is to draw a small blister with a cantharidal plaster, expel the serous exudate and introduce the virus in its place. Then wait until the virus is dry before applying the dressing, which should be a simple, clean, aseptic (not antiseptic) one, and the patient can be dismissed, to reappear at the proper time for verification as to the success or failure of the procedure. With such a technique and good fresh virus a failure would indicate a non-susceptibility, but, under such circumstances, the vaccination should be repeated before assuring the patient of definite protection from smallpox.

ICE IN RESTAURANTS.

That the people at large have rather definite ideas as to the dangers of infection from suspicious drinking waters is evidenced by the increased use of artesian, filtered and distilled waters for table use and the increasing numbers of restaurants advertising these as means for drawing custom. That these ideas have been extended to the ice used to cool beverages can not be as-

serted. The absurdity of pouring distilled water on cracked ice, derived from lakes and contaminated with all kinds of filth, visible and invisible, manure, urine, putrefying vegetable matter, etc., and regarding it as a pure beverage because of the distilled water, does not seem to have made itself evident to the proprietors of some of our even most prominent restaurants.

Artificial ice is really the only ice which should ever be used—when obtainable—for cooling beverages in the usual manner. Of course, if the fluid and the ice are kept absolutely from contact with each other and contamination by those through whose hands they pass can be excluded, even contaminated ice might be used, but that is not the usual procedure. With artificial ice we can be reasonably certain to be free from danger. The water is distilled, or at any rate boiled, for unless the air is expelled from it a good, clear, transparent ice can not be produced, and boiling will destroy the pathogenic germs it may contain. With the low price at which artificial ice, especially in quantities, can be procured, it certainly is not too much to expect of our restaurants that they furnish pure ice instead of congealed filth at their tables.

Doctors in an Ohio town have formed an association and agreed not to cut prices. They should now further agree not to cut people.

A New York woman had a tailor locked up for kissing her. No woman cares to be so saluted by the ninth part of a man when there are plenty of the whole thing seeking for such alleged sweets.

The National Jewish Hospital for Consumptives.

By ALFRED MULLER,

Secretary of the Local Board of Control, Denver, Colo.

Unique in its purposes, in its methods of treatment and in its management stands the National Jewish Hospital for Consumptives. Acting upon the theory, probably, that those suffering from tubercular trouble should be kept separated in sanatoria established for that purpose, the hospital is located in the eastern portion of the city of Denver, a thinly populated portion of the suburbs of the city, opposite the City park (which covers an area of about six to eight hundred acres), overlooking both the park and the foothills and peaks of the Rocky mountains.

Although supported entirely by voluntary subscriptions from the Jewish people in every part of the United States, the hospital is, in its broadest sense, non-sectarian. The only passport which will open its doors is necessity and consumption in its possibly curable stages. In other words, it is for those who can be helped but have not the necessary means to secure that help.

From the president of the institution to the interne in the hospital, including the board of managers, the medical advisory board and the medical and surgical staff, which includes the ablest physicians and surgeons of the Rocky Mountain region, all give their services gratuitously to the institution. None but the actual working staff of the hospital receive any pay for services. On the same plane, no one who is admitted within its doors as a patient is permitted to pay for his attendance, maintenance and care. As all that main-

tains the hospital is provided by voluntary subscription, so all that are maintained as patients are maintained without charge. All are treated alike, and none who enter there may feel, therefore, that they are objects of charity.

As stated before, the building is situated in an elevated portion of the city of Denver, overlooking the City park on the north, and on the west the Rocky mountains. To the east and south, it is open country.

The building is a three-story one of brick, with stone trimmings. The basement is of stone foundation. The kitchen and dining rooms are in a separate building, somewhat apart from the main building, in which is also located the boiler-room and morgue.

On the first and second floors of the main building are located the wards and sick rooms. The operating room, sterilizing room and office are also located on the first floor. The operating room is separate from the sterilizing room and is entirely fitted up in Italian marble, closely cemented. Each main hall opens up into the large wards. In each ward there are eighteen beds. The system of ventilation is an excellent one, following the Studevant system. The heat is driven into the wards and rooms through radiators, located in the upper part of the walls, by means of a large fan in the basement. The impure air is "sucked up" through flues leading to the chimneys by means of heated pipes. Besides these wards, there are fourteen rooms on both

floors for use of patients in the different stages of the disease. The present capacity of the hospital is for sixty-eight patients.

On the third floor of the building are the rooms for superintendent, interne, nurses, housekeeper and other attendants. The basement contains the engine rooms, lockers, store rooms, etc.

From the main hall on the first floor are doors leading into the sun room, which faces the east; from thence you go on to the dining rooms and kitchen. There is a dining room for patients and

needful exercise, to have them work in a garden to be kept in the rear of the hospital building.

The results which may be attained in the hospital are watched with keen interest by the medical profession. It is believed, however, that it can only result in good, both from a medical and philanthropic standpoint.

The medical and surgical staff is constituted as follows:

Advisory Board—John Elsner, M. D.; Saling Simon, M. D.; Robert Levy, M. D.



a dining room for the working staff. The boiler room is to the west of the kitchen. There is nothing situated in the hospital proper which is of inflammable character or which could ignite. All heating and cooking is done in the kitchen and boiler building, which is separate and apart from the main building.

This institution was dedicated and opened its doors on the 10th of December last. Since that day forty-two patients have been received, and they have come from every section of the country.

It is the intention of the management, in order to give the patients

Medicine—Saling Simon, M. D.; S. T. Jarecki, M. D.; Wm. N. Beggs, M. D.; A. Zederbaum, M. D.; M. Kleiner, M. D.; John Elsner, M. D. Consultants—C. B. Van Zant, M. D.; Herbert B. Whitney, M. D.

Surgery—Leonard Freeman, M. D.; Clayton Parkhill, M. D.; John Boice, M. D.; William B. Craig, M. D.

Gynaecology—H. G. Wetherill, M. D.; Thos. H. Hawkins, M. D.; C. K. Fleming, M. D.

Obstetrics—Minnie C. T. Love, M. D.; T. Mitchell Burns, M. D.

Rhinology and Laryngology—Samuel H. Meuer, M. D.; Robert Levy, M. D.; Henry H. Howland, M. D.

Ophthalmology and Otology—D. H. Coover, M. D.; W. C. Bane, M. D.; Melville Black, M. D.

Neurology—B. Oettinger, M. D.; W. J. Rothwell, M. D.

Dermatology—James M. Blaine, M. D.

Bacteriology and Pathology—Philip Hillkowitz, M. D.

Dentistry—Geo. J. Hartung, M. D.

Denver and Arapahoe Medical Society Meetings.

This report appears only in this Journal.

A regular meeting of the Denver and Arapahoe Medical Society was held at the Brown Palace hotel, Tuesday evening, November 28, 1899. President Whitney presided. The minutes of the previous meeting were read and approved.

The regular scientific programme was then carried out:

1. Some Observations on the Symptoms, Complications and Treatment of Typhoid Fever. Dr. E. W. Kenney. Discussed by Drs. McLauthlin, Edson, Pershing, Axtell, Rothwell and Whitney, and closed by Dr. Kenney.

2. The use of Holocain in Ophthalmic Operations and Diseases. Dr. Edward Jackson. Discussed by Drs. Black, Bane and Stevens.

The meeting then adjourned.

EDWARD DELEHANTY,
Secretary.

A regular meeting of the Denver and Arapahoe Medical Society was held at the Brown Palace hotel, Tuesday evening, December 12, 1899. In the absence of Drs. Whitney and Delehanty, Drs. Fleming and George acted as president and secretary respectively. The minutes of the previous meeting were read and approved.

The regular scientific programme was then carried out:

1. a. Cervical Stump After Amputation in Childhood. b. Purulent Synovitis of the Knee Joint—Excision of the Entire Synovial Membrane—Recovery. Dr. Chas. A. Powers. Discussed by Dr. Leonard Freeman.

2. A Preliminary Paper on the Treatment of Dypsomania. Dr. E. P. Hershey. Discussed by Drs. Pershing and Hopkins and closed by Dr. Hershey.

The resignation of Dr. Allen was read and accepted.

At the suggestion of Dr. Spivak, the acting secretary was instructed to draft resolutions of sympathy for Mrs. Axtell.

The meeting then adjourned.

M. M. GEORGE, Secretary.

A regular meeting of the Denver and Arapahoe Medical Society was held at the Brown Palace hotel, Tuesday evening, December 26, 1899. Dr. Whitney presided.

The minutes of the previous (special) meeting were read and, with correction as to date of Dr. Axtell's death, approved.

Dr. Albert L. Bennett was proposed for membership.

The following regular scientific programme was then carried out:

1. Tuberculosis in Colorado, Methods of Dissemination and Measures for its Restriction. Dr. Geo. F. Tyler. Discussed by Drs. Hall, Mitchell, Blaine, Bennett, Beggs, Edson, and closed by Dr. Tyler.

2. On the Action of Static Electricity in Relieving Some Muscular and Arthritic Pains. Dr. Geo. L. Stover. Discussed by Drs. Minnie C. T. Love and J. M. Blaine.

Dr. T. E. Taylor reported a case of twin pregnancy with premature death and maceration of one foetus. The specimen showed the common chorion containing the two amniotic sacks. One foetus reached only six months' development. The part of the placenta corresponding to it has undergone fatty degeneration. The other foetus reached perfect development.

On motion of Dr. Tyler, the board of directors was instructed to write to our senators and representatives in congress, urging them to use their influence against Senator Gallinger's antivivisection bill.

The meeting then adjourned.

EDWARD DELEHANTY,
Secretary.

The annual meeting of the Denver and Arapahoe Medical Society was held at the Brown Palace hotel on the evening of January 9, 1900, President Whitney in the chair. The minutes of the previous meeting were read and approved.

The board of censors having reported favorably on the name of Dr. Alfred L. Bennett, he was elected to membership. Dr. J. A. Lambert was proposed for membership.

As there was no scientific programme, the president read the annual address.*

*Published on page 38.

The report of the treasurer was then read and accepted, and a vote of thanks extended to the treasurer, Dr. E. J. Rothwell.

The secretary's report, as follows, was read and accepted:

Number of regular meetings.....	16
Number of special meetings.....	2
Total number of meetings.....	18
Highest attendance.....	52
Lowest attendance.....	16
Average attendance.....	34
Average attendance during the year 1898.....	48
Net loss in average attendance..	14
Number of papers read.....	30
Number of cases reported.....	12
Number of cases shown.....	5
Number of specimens shown.....	11
Number of new instruments shown..	1
Number of members taking part in the discussions.....	101
Number of members elected during the year.....	7
Losses in membership—	
By death.....	3
By resignation.....	4
Dropped	2
Total	9
Present membership—	
Resident	183
Honorary	3
Corresponding	2
Total	188

The financial secretary reported that his accounts had not yet been passed upon by the board of censors, and that he would make a complete report at the next meeting.

Moved by Dr. C. D. Spivak, and carried, that a committee of three be appointed by the chair to look up the records of the society. The chair will appoint the committee in the future.

The following officers for the year 1900 were then elected:

President, Dr. C. K. Fleming.
 Vice President, Dr. H. G. Wetherill.
 Secretary, Dr. C. P. Conroy.
 Treasurer, Dr. E. J. Rothwell.
 Financial Secretary, Dr. Geo. Stover.
 Board of Censors, Dr. E. P. Hershey,
 chairman; Dr. W. A. Jayne, Dr. Leonard
 Freeman, Dr. Edward Jackson, Dr.
 Josiah N. Hall.

It was moved and carried that a vote of thanks be extended to the retiring officers for the painstaking and conscientious manner in which they performed their duties during the past year.

It was moved and carried that a vote of thanks be extended to the managers of the Brown Palace hotel for courtesies during the year.

The meeting then adjourned.

EDWARD DELEHANTY,
 Secretary.

The regular meeting was held at the Brown Palace hotel, Tuesday evening, January 23, 1900, President Fleming in the chair.

The minutes of the last meeting were read and approved.

The board of censors having reported favorably on the name of Dr. J. A.

Lambert, he was elected to membership.

The following physicians were proposed for membership: Dr. Alice Guthrie, Dr. Jean Gale, Dr. Hubert G. Wilbur, Dr. G. W. Holden and Dr. Howard R. Elliott.

The following scientific programme was then carried out: Dr. E. C. Hill read a paper on "Chronic Interstitial Nephritis." It was discussed by Drs. McLauthlin, Freeman, Beggs, Hall, Spivak, Hershey and Stevens. In this connection Dr. Crews exhibited a specimen of secondary carcinoma of the kidney, giving a report of the case. The discussion was closed by Dr. Hill.

Dr. Bennett exhibited a specimen of splint used by a tribe of negroes in the west coast of Africa. He also exhibited specimens of cheloid growths.

Dr. Jayne read a communication from the Denver Republican regarding the publication of a work on "Fifty Years of Medicine and Surgery in Colorado." The communication was referred to the board of censors.

There being no further business, on motion the meeting adjourned.

C. P. CONROY, Secretary.

The Denver Clinical and Pathological Society.

This report is published in this Journal only.

The Denver Clinical and Pathological Society met the evening of December 8, 1899, in the Physicians' building, the entertaining members being Drs. Beggs, Bergtold, Black, Kenney and Van Zant. Twenty-six members and one guest were present. The minutes of the last meeting were read and ap-

proved. Dr. Jackson proposed the name of Dr. E. W. Stevens for membership.

Dr. Hershey moved that the secretary be instructed to convey to Mrs. Axtell the sentiment of the society concerning the grave illness of Dr. Axtell. Carried.

No patients were shown.

Dr. Beggs exhibited a slide showing the structure of the growth exhibited by Dr. Black at the November meeting. He also exhibited specimens of sausage coverings and vegetable matter obtained from feces. Discussion by Drs. Fenn, Wetherill and Jackson.

Dr. Whitney reported a case of sudden, unexpected death from coronary thrombosis, the pulse being slow. Discussed by Drs. Edson and Bergtold.

Dr. Jackson reported the normal course of a case of astigmatism measured by the ophthalmometer.

Dr. Edson reported success in the use of Crede's ointment in the reduction of high temperature of fibroid tuberculosis.

Dr. Fleming reported a labor in a patient with a double vagina. Discussed by Dr. Bergtold.

Dr. R. B. Freeman reported successful use of medium diet in typhoid.

Dr. Hershey reported a case of gonorrhoea in a girl of two years, contracted in a water closet. Discussed by Drs. Black, Blaine, Pershing and Powers.

Dr. Van Zant reported a case of recurrent intestinal obstruction without fever, local tenderness or tumor. Discussed by Drs. Hershey, Hall, Powers, Mann and Beggs.

Dr. Bergtold made a report on the average size of the human heart, and showed a specimen of vicious union in a fractured tarsus of a "flicker."

Dr. Waxham reported a case of oedema of the larynx (treated by punctures) in the last stages of phthisis; a case of embolic pneumonia following an operation for varicose veins; and the use of hypnotic suggestion in the reduction of a dislocated elbow, in an intubation for diphtheritic laryngitis, and for removal of mucous polypi.

Dr. Pershing reported an untreated chancre without development of secondaries for three months. Discussed by Drs. Mann and Whitney.

Dr. Mann reported a case of suppurative gonorrhoeal arthritis.

Dr. Hall reported the transformation of a mitral regurgitant to a presystolic murmur under digitalis.

Adjourned.

G. E. TYLER, Secretary.

A regular meeting of the Denver Clinical and Pathological Society was held the evening of January 12, 1900, at 1632 Welton street, the entertaining members being Drs. Wetherill, Hill, Kleiner, McNaught and Fenn. Thirty members were present, and Drs. Hubert Work, of Pueblo, and Lyle Graham, of Denver, were guests.

Minutes read and approved.

The membership committee reported the election of Dr. E. W. Stevens to succeed the late Dr. E. R. Axtell.

Dr. Levy exhibited a specimen showing unusually extensive laryngeal tuberculosis. Discussed by Dr. Hall.

Dr. Waxham exhibited a very large mucous polyp from the naso-pharyngeal vault, and over thirty mucous polypi from one patient.

Dr. Hershey reported the successful use of spring adhesive strips to close a wound of the face.

Dr. Hall reported seven cases of supernumerary nipples. Discussed by Dr. Powers.

Dr. Waxham reported a case of hysterical simulation of laryngeal obstruction. Discussed by Drs. Black, Fenn and Levy.

Dr. Jackson reported a case of cyst due to dilatation of the glands of Moll. Discussed by Dr. Black.

Dr. Whitney reported the symptoms of a case of probable pulmonary embolus. Discussed by Drs. Waxham and Hill.

Dr. Perkins reported a case of tubal pregnancy and exhibited specimens. Discussed by Dr. McNaught.

Dr. Black reported a case of syphilis, probably contracted by using a contaminated rectal syringe. Discussed by Drs. Whitney, Edson and Powers.

Dr. Work reported two cases of facial erysipelas, one at confinement, uterine infection being prevented, the

other in an attempted suicide. He also reported a case of hysterical vomiting in a range rider cured by suggestion.

Dr. Fleming exhibited a double knot in an umbilical cord.

Dr. Mann reported a case of pneumonia in a boy of 6 with almost complete absence of physical signs, the diplococcus pneumonia being present. Discussed by Drs. Edson, Whitney, Beggs and Waxham.

Adjourned.

G. E. TYLER, Secretary.

The Denver Clinical Society.

This report appears in no other medical journal.

Meeting of January 2, 1900.

The Denver Clinical Society met Tuesday evening, January 2, at 324 McPhee building.

Members present were Drs. Gale, Bates, Mitchel, Hoffman and Drs. Connely, Teele and Miss Stewart as guests.

The president, Dr. Guthrie, being absent, the second vice president, Dr. Mitchel, called the meeting to order.

In the absence of the secretary, Dr. Kapp, the president, appointed Dr. Hoffman secretary pro tem.

The minutes of the last meeting were read and approved.

The medical programme was furnished by Dr. Mitchel: "The Treatment of Leucorrhoea by the Use of Yeast." The discussion was opened by Dr. Bates. General discussion by Drs. Gale, Hoffman and Connely.

The society adjourned to meet January 16, 1900.

Meeting of January 16, 1900.

The Denver Clinical Society met at the usual hour, with the president in the chair.

There were present Drs. Bates, Mitchel, Gale, Bedortha and Kapp; guests, Drs. Connely, Teele, Miss Stewart.

Under unfinished business, the location committee was discharged. The society decided to take no positive action at the present time, and to continue to meet at 324 McPhee building until further notice.

The name of Dr. May Teele was proposed as a regular member, and Dr. Jennie Bailey, of Florence, Colo., as a corresponding member.

Dr. Mitchel was appointed as a committee to form a circulating library of the journals taken by the members of the society.

The medical programme was given by Dr. Gale: "Some Aural Conditions of Interest to the General Practitioner." Discussion opened by Dr. Bedortha. General discussion by the members.

The society adjourned to meet February 6, 1900.

Meeting of February 6, 1900.

The Denver Clinical Society met at 324 McPhee building. Dr. Guthrie called the meeting to order.

The members present were Drs. Root, Gale, Goodman, Mitchel, Kapp; guests, Drs. Connely, Teele, Miss Stewart and Miss Owens.

The board of censors reported favorably on the names of Drs. Teele and Bailey and they were unanimously elected to membership.

The medical programme consisted of reports of cases by the members present.

Dr. Guthrie reported a case of septicemia.

Dr. Root spoke of the use of aristol in surgical dressings.

Dr. Mitchel reported a case of scrotal hernia, also a case of congenital double inguinal hernia and syphilis.

Dr. Gale gave the history of a case of "disease of the antrum of Highmore" which had been diagnosed as middle ear trouble.

Dr. Connely reported a case of fracture of the femur, with perfect repair, in a patient aged 90 years.

Dr. Teele gave the history of a case of pneumonia characterized by a peculiarly low temperature throughout the course of the disease.

Dr. Kapp reported a case of recurring tonsillitis cured by the administration of thyroid extract.

A general discussion followed.

The society adjourned to meet February 20, 1899.

JULIA SEATON KAPP,
Secretary.

NEWS ITEMS.

DR. WORK'S NEW SANATORIUM.

Dr. Work has begun the erection of his new sanatorium on ground formerly known as the Anderson ranch, near Pueblo. The building will cost \$18,000 and when completed will be the only institution of its kind in the Rocky Mountain region. Some years ago Dr. Work established a private asylum for the care of feeble-minded, and it has grown until it has become necessary to increase the size for the accommodation of the large number of applicants. Until recently the unfortunates have been kept in the building known as

the Mount Pleasant house, on East Sixth street, and at the time that it was occupied it had ample accommodations for all patients. Some weeks ago all men confined in the sanatorium were sent to the new place, and when the new buildings are done the women will be removed. The institution will in future be known as the Woodcroft Sanatorium.

Beauty is one of the features of the new building. It will face south and east and will be three stories high. Two wings will be put up. One will be 40 by 60 feet and the other will be

30 by 45 feet. The ground floor will be of veneered brick and the two upper stories will be of frame covered with shingles. Hard wood floors will be put in all over the building, and between the floors cement will be used to prevent rapid spread of fire, a construction known as slow combustion. Modern appliances will be installed throughout. Steam will be used for heating, and the boiler building will be apart from the main structure to prevent any possibility of an accident from this source. There will be a large basement, 30 by 40 feet, and in this there will be a complete cold-storage apartment for the preservation of fruits and vegetables. Electricity will be used for lighting, though the building will be piped for gas.

When Dr. Work got the Anderson property he procured one of the most valuable tracts in the county. It covers twenty acres, and has over 700 fruit trees that are fifteen years old. A large portion of the grounds is given up to agriculture, and this will be utilized for furnishing employment for the inmates, it having been proved long ago that the unfortunates are kept in better condition when they are occupied with some wholesome occupation such as farming. The purchase of the land carried with it a perpetual water right that provides a sure supply for agricultural purposes. In addition to the main building there are two cottages on the ground, and these will be utilized for quarters for the attendants and for kitchens and dining rooms for the patients.

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A MEDICAL HERO.

Very many deeds of heroism in the practice of medicine are overlooked and escape notice because they are un-

ostentatiously performed in the regular routine of obedience to duty. When such a case can be rescued from oblivion it becomes a pleasure to embrace the opportunity.

On February 7 a telegram was received at Buena Vista, Colo., from St. Elmo that there had been an accident at the Forest Hill mine, in Taylor park, one miner being injured beyond recovery and several others hurt. It was thought that, owing to a blizzard then raging and the amount of snow on the range, it would be impossible to get medical aid to them. Dr. John Gafford, however, consented to make the trip and started out in a raging snow storm, it being the expectation that it would take at least forty-eight hours to reach his destination.

On the 9th a stranger arrived at Buena Vista from Tin Cup, reporting a heavy fall of snow and the wind blowing a regular gale. He stated that Dr. Gafford had reached Tin Cup the previous day, it having required twenty-two hours to travel thirty-six miles. He still had twenty-five miles to cover. No word has been received since he left Tin Cup. Those who know the country say that if he makes the round trip without suffering very severely it will be a wonder, as it turned very cold.

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FIFTY YEARS OF MEDICINE AND SURGERY IN COLORADO.

Colorado's Proclamation to the Health-Seeking World.

The Denver Republican has a work in course of preparation, entitled "Fifty Years of Medicine and Surgery in Colorado—Colorado's Proclamation to the Health-Seeking World," to be is-

sued in two volumes, at \$30 per copy, and is at present circulating the prospectus among the physicians of Denver, asking their endorsement of the project and getting subscriptions. The management of the paper expressed a desire to submit the work to the Board of Censors of the Denver and Arapahoe County Medical Society before publication. After careful consideration the society failed to appreciate that the work was in any degree to their interest, and therefore found no reason to coöperate in its preparation. The society further decided to withhold its sanction and approval of the work, and to advise its members to do the same and not to permit their biographies or portraits to appear in it. This action was taken because it was uncertain as to what the ultimate character of the work might be, and for the further reason that it promised to be essentially an advertisement of the state. It was considered that it might prove prejudicial to the profession of the state, and especially to such physicians as appeared in it, in the estimation of the profession at large, to appear to have sanctioned or endorsed it. A number of those who have given their endorsement now regret it.

The medical profession of Colorado did their part in bringing the advantages of the state to the attention of the medical profession in the most efficient and authoritative manner by entertaining the American Medical Association two years ago, and it is deemed unnecessary now to coöperate in methods that might prove unethical and contrary to the best practice and good taste.

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THE SHIPMENT OF DEAD BODIES.

The State Board of Health has issued a circular, addressed to transportation

agents, health officers and all others concerned, regarding the transportation of dead bodies. The circular says:

"The transportation of bodies dead of smallpox, Asiatic cholera, yellow fever, typhus fever or bubonic plague is absolutely forbidden.

"The bodies of those who have died of anthrax, blood poisoning, cerebro-spinal meningitis, consumption, croup, diphtheria, enteric fever, erysipelas, glanders, leprosy, measles, membranous croup, phthisis, scarlet fever and other dangerous and communicable diseases shall not be received for transportation unless prepared for shipment by an embalmer holding a certificate from the Colorado State Board of Health."

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PREVENTION OF THE SPREAD OF CONSUMPTION.

The following rules are suggested by the Board of Health of Brighton, England: (1) Expectoration indoors should be received into small paper bags and afterward burned. (2) Expectoration out-of-doors should be received into a suitable bottle, to be afterward washed out with boiling water; or into a small paper handkerchief, which is afterward to be burned. (3) If ordinary handkerchiefs are ever used for expectoration, they should be put into boiling water before they have time to become dry, or into some disinfectant solution to be ordered by the doctor. (4) Wet cleaning of rooms, particularly of bed rooms occupied by sick persons, should be substituted for "dusting." (5) Sunlight and fresh air are the greatest enemies of infection. Every consumptive should sleep with his bedroom window wide open top and bottom, and during the day should occupy a well-ventilated room. Re-breathed

air is the main condition favoring consumption. If the patient is warmly clad he need not fear keeping out in any weather. N. B.—The patient himself is the greatest gainer by the above precautions, as his recovery is retarded and frequently prevented by renewed infection derived from his own expectation. (6) Persons in good health have no reason to fear the infection of consumption. Over-fatigue, intemperance, bad air, and dusty occupations favor the spread of the disease.

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SMALLPOX IN NEW MEXICO.

Colorado has a constant source of infection for smallpox in New Mexico, where the disease exists almost constantly and the people take few precautions against its spread. So serious is the matter regarded by the Colorado State Board of Health that it has appealed to the United States Marine Hospital service to take charge of the epidemic there. Dr. Tyler, the secretary of the Colorado State Board of Health, has addressed the following letter to Dr. Walter Wyman, surgeon general of the Marine Hospital department:

"The state of Colorado has repeatedly been infected with smallpox from New Mexico, owing to the constant prevalence of the disease in that territory, and the laxity of administration of health regulations. The State Board of Health some time ago directed me to take up the matter with a view of lessening the danger from that source. I have corresponded with the governor of New Mexico and the Territorial Board of Health. The governor promised to look after matters more closely, yet the danger has not in any degree been lessened.

"Recently we have had infection from Folsom, N. M., and I am informed from a reliable source that in and about Folsom there are now about fifteen cases of smallpox, that the schools are kept open, and that no effort whatever is made to restrict the spread of the disease. Persons who have been exposed are permitted to loiter about the railway stations, and even to enter the cars of passing trains without hesitancy.

"Some two months ago the same difficulty existed at Catskill, N. M., and Colorado was seriously infected from that point. The infections have become so numerous and the carelessness of the New Mexico officials so inexcusable, that I have been directed by the State Board of Health to lay the matter before you, and to request that the health matters of New Mexico be taken in charge by the Marine Hospital service. Hoping for your favorable consideration, I am, very respectfully,

"G. E. TYLER,

"Secretary."

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SMALLPOX CASES IN THE SOUTH.

New Orleans, Jan. 31.—The entire South seems infected with smallpox. There are thousands of cases in Mississippi, Alabama and Louisiana.

In New Orleans there are 170 cases, the majority colored, but the death rate is small. There have been sixteen cases and three deaths in the medical department of the Tulane university.

The disease is prevalent throughout Mississippi. The worst infected point is Anding, where there have been twenty-three deaths since Dec. 1. There are not less than 4,000 cases in the state.

In Austin, Tex., since Jan. 1, 259 cases and four deaths have been officially reported.

In Alabama the epidemic is greatest in the northern part.—Rocky Mountain News.

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SMALLPOX IN COLORADO.

From January 9 to February 9 the following cases of smallpox have been reported to the Colorado State Board of Health:

	Date Reported	LOCATION	Date of Manifestation	Source of Infection
4	Jan. 9	Denver	Jan. 6	Unknown.
2-3-4	" 9	Walsenburg	" 9	Walsenburg.
5	" 12	Denver	" 7	Folsom, N. M.
6	" 17	Hugo	" 2	Hugo.
7	" 23	Leadville	" 17	Probably Denver.
8	" 24	Denver	" 19	Butte, Mont.
9	" 24	Denver	" 22	Denver, Case 5.
10	" 24	Denver	" 25	Denver, Case 5.
11	" 27	Walsenburg	" 26	Walsenburg.
12	" 31	Denver	" 29	Unknown.
13	Feb. 4	Torres	Feb. 4	Unknown.
14-15	" 9	Denver	" 7	Not stated.

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SMALLPOX IN IDAHO.

A portion of Idaho has become very much excited over the simultaneous appearance of smallpox in a number of places and the people are generally aroused. The public schools have been closed in Weiser and Hailey, and at Soldier, near the latter place, a strict quarantine is maintained, no one being permitted to come in from the outside for fear of introducing the infection. Although the disease is in a mild form the people are greatly alarmed.

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Smallpox has broken out in the Mexican settlement a few miles below Pagosa Springs, Colo., and a spread of the disease is feared. While the authorities are trying to maintain a quarantine, the Mexicans do not seem to understand, or do not want to understand, and come into town and visit ranches near town.

An epidemic of smallpox is raging in Minneapolis, and already seventy cases have come to light, with more to hear from, as several patients, just before they were stricken, visited one of the big department stores and there brushed against thousands of persons.

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COUNTY HEALTH OFFICERS.

The following letter has been sent out by Dr. Geo. E. Tyler, secretary of the Colorado State Board of Health, to the chairmen of the various boards of county commissioners:

"Acting under the advice of Governor Thomas, the State Board of Health has directed me to enforce the law requiring the appointment of one or more physicians in each county, who shall be health officers or officers of said county and shall have jurisdiction for said county outside of incorporated cities and towns.

"The law also provides that such health officer or officers shall act in cooperation with and under the advice of the State Board of Health.

"If your county already has a health officer, you will please furnish me with his name and address; if not, you will please appoint a physician as health officer and advise me of his name and address.

"Please also be kind enough to furnish me with the name of the incorporated cities or towns within your county."

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The Pueblo County Medical Society has chosen Dr. H. A. Black to represent it in the Journal in the future. Its officers are: President, Dr. W. W. Bulette; first vice president, Dr. Hubert Work; second vice president, Dr. T. A. Stoddard; secretary, Dr. H. A.

Black; treasurer, Dr. W. F. Singer. Its programme, which has been published for the entire season, is full of interesting subjects.

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Chas. H. Vivian has been charged by the Colorado State Board of Medical Examiners with practicing medicine without having gone through the necessary preliminary formalities. It is said that he admits having treated Mrs. Wright, of the Royal lodging house, at Fifteenth and Market streets, Denver, and that she died while under his care. His case has been set for February 7.

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The Denver Health Commissioner is stirring up the physicians for not reporting births. It is well to remember that the city ordinances require from every physician a report before the fifth of each month whether he has been present at any birth or not. The penalty for failure to report is a fine of from three to one hundred dollars.

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At a meeting of the Medical Society of Weld County, January 29, the following officers were elected for the ensuing year, namely: Dr. G. H. Call, president; Dr. G. Law, vice president; Dr. J. K. Miller, secretary and treasurer. The sentiment of the society was unanimously against the pending bill in congress opposed to vivisection.

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The staff at St. Anthony's Hospital for 1900 is as follows:

Medicine—J. N. Hall, M. D.; G. E. Tyler, M. D.; R. B. Freeman, M. D.; C. P. Conroy, M. D.

General Surgery—John Boice, M. D.; Leonard Freeman, M. D.; G. W. Miel, M. D.

Gynaecology and Abdominal Surgery—C. K. Fleming, M. D.; Thos. H. Hawkins, M. D.

Neurology—S. D. Hopkins, M. D.; W. J. Rothwell, M. D.

Obstetrics—R. F. LeMond, M. D.; D. H. Coover, M. D.

Pediatrics—C. F. Shollenberger, M. D.

Laryngology—Robert Levy, M. D.

Dermatology—W. H. Davis, M. D.; G. M. Blaine, M. D.

Haematology—Geo. H. Stover, M. D.

Pathology—Wm. N. Beggs, M. D.

Consultants in Medicine—John Elsner, M. D.; P. D. Rothwell, M. D.; C. P. Burns, M. D.

Consultant in Obstetrics—W. H. Buchtel, M. D.

Assistant in Surgery—A. H. Williams, M. D.

Assistant in Gynaecology—S. T. Brown, M. D.

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Mrs. Myrtle Larson, living about one mile west of Fort Collins, was arrested February 3, charged with violating the sanitary laws—breaking scarlet fever quarantine. The information was filed by Dr. P. J. McHugh, physician to the County Board of Health.

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In Rome the influenza epidemic is on the increase. In London it is abating. In the latter city, during the week ending January 31, the death rate was 22.6 per 1,000, while during the week before it was 30.9.

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Reprints received this month from Lewis H. Adler, Jr., M. D., of Philadelphia; Howard Lilienthal, M. D., of New York City, and E. W. Stevens, of Denver.

The medical staff for the Arapahoe County Hospital has not yet been appointed for 1900. Last year's staff is still serving, notwithstanding rumors of change.

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At the County hospital last month the record of deaths reached 25, a most incredible death rate. About 180 patients were cared for there during the month.

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A Saigon woman gave birth to twins joined together like the famous Siamese twins. The children are to be sent to the Paris Exposition.

Folsom, N. M., has been quarantined by Trinidad, Colo., on account of the smallpox epidemic existing in the former town.

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The directors of the Florence Crittenton Home have retained Dr. Minnie C. T. Love as chief medical adviser for the year 1900.

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The plague, which has been causing a great deal of apprehension in the Sandwich Islands, is now under control.

BOOK REVIEWS.

HISTOLOGY AND PATHOLOGY.

A Manual for Students and Practitioners. By John Benjamin Nichols, M. D., Demonstrator of Histology, Medical Department, Columbian University, and Frank Palmer Vale, M. D., Assistant in Pathology, Medical Department, University of Georgetown, Washington, D. C. Lea's Series of Pocket Text-Books, edited by Bern. B. Gallaudet, M. D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, Columbia University, New York. 458 pages, 213 illustrations. Price, \$1.50 net. Lea Brothers & Co., Philadelphia and New York, Publishers.

In this book the essentials of the two subjects named are presented briefly but very clearly. As expressed in the preface, originality of data is little to be expected on these subjects. The work is to be commended for the lucidity of treatment which is marked

throughout. The chapters treating of the cells and extra-cellular elements, and their intimate structure, and of reproduction and development, are especially well written and will well repay perusal by physician or student. The illustrations are numerous and judiciously selected.

REFRACTION AND HOW TO RE-

FRACT. Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-Glasses, etc. By James Thorington, A. M., M. D., Adjunct Professor of Ophthalmology in the Philadelphia Polyclinic and College for Graduates in Medicine; Assistant Surgeon at Wills' Eye Hospital; Associate Member of the American Ophthalmological Society; Fellow of the College of Physicians of Philadelphia; Member of the American Medical Association; Ophthalmologist to the Elwyn and the Vineland Training Schools for

Feeble-Minded Children; Resident Physician and Surgeon, Panama Railroad Co., at Colon (Aspinwall), Isthmus of Panama, 1882-1889, etc. 200 illustrations, 13 of which are colored. Octavo, 301 pages. Price, \$1.50 net, cloth. P. Blakiston's Son & Co., 1012 Walnut street, Philadelphia, Pa.

This is a very comprehensive, simple and concise presentation of the subject of ocular refraction. The physician who is desirous of knowing something of this subject will find this little book of great assistance. The subject from every standpoint is taken up in a very systematic manner, even to the glass to prescribe and the manner of taking the measurements for the frames. The chapter on retinoscopy is very plain, but will be more easily comprehended by the beginner if he will decide to use the plain mirror, and therefore discard such portions of the chapter as pertain to the use of the concave mirror. The chapter on optics contains a very valuable explanation of lens combinations that is very seldom found in text books on refraction.

We are inclined to think that the author underestimates the value of homatropin as a cycloplegic. We think he is hardly consistent when he recommends atropine as a cycloplegic be-

cause of its being possible to prescribe and have the patient wearing the glasses before the effects of the cycloplegic have worn off, and further on advises that the effects of the cycloplegic be allowed to wear off and then prescribe the glasses that the patient accepts.

MELVILLE BLACK.

MODERN MEDICINE AND HOMEOPATHY. By John B. Roberts, A. M., M. D. The Edwards & Docker Company, Philadelphia, Publishers.

This is a publication in book form of two presidential addresses, "Points of Similarity Between Us and Homeopathic Physicians," and "The Present Attitude of Modern Medicine and Physicians Towards Homeopathy," addresses delivered before the Philadelphia County Medical Society and the Medical Society of the State of Pennsylvania, respectively. It would be well if all physicians could read them, for the tendency is to remove the feeling of rancor which unquestionably exists in the minds of some. The abandonment of the essential doctrines of homeopathy by its practitioners of the present day is shown by their own writings as well as the flimsy character of the barrier now separating them from the fold of the modern physicians.

In Lighter Vein.

MISTAKEN IN THE CASE.

Some time ago one of Marshall's most charming young ladies slipped and fell on the stepping stones in front of her father's house and sprained her knee. It grew so bad that she thought

it necessary to call in a physician. She had formed a dislike to the family doctor, so her father suggested several others, and finally it was decided to call the spruce young man with a homeopathic case that passed the house every day.

They kept a sharp lookout, and when he came along called him in. The young lady modestly raised her skirts and showed the disabled member. The little man looked at it and said:

"That certainly is quite serious."

"Well," said she, "what shall I do?"

"If I were you," he whispered, "I would send for a physician; I am a piano-tuner."—Howard County (Mo.) Echo.

HAD HIS SHARE.

Recently a medical man told this tale at a professional banquet:

"Not long since," said the doctor, "a member of the medical profession died and in due time approached the gates of the Beautiful Land. He was, of course, accosted by St. Peter.

"What is your name?" asked the aged doorkeeper.

"Sam Jones," was the reply.

"What was your business while on earth?"

"I was a doctor."

"Oh, a physician, eh?"

"Yes, sir."

"Made out your own bills, I suppose?"

"Yes, sir."

"Collected 'em yourself?"

"Why—why—yes, sir," stammered the wondering shade of the physician.

"And then St. Peter threw wide the portals and said: 'Go right in, my friend; if you've done that you've had punishment enough.'" — Colorado Springs Facts.

A SOLOMON AND HYPNOTISM.

A story is told of a judge who lately had the hypnotic plea raised before him by a burglar. The prisoner claimed that he did not know that he was "burgling;" that he did it auto-

matically and unconsciously, under the direction of a hypnotist.

The judge said he would give him the full benefit of the law, and also of his hypnotic misfortune. He thereupon sentenced the man to five years' penal servitude, but told him he could, if he chose, send for the hypnotist, and have himself made unconscious for the entire term of his imprisonment.

"The same power," said the judge, "which enabled you to commit burglary and not know it, ought also to enable you to suffer imprisonment with hard labor and not be aware of it. At any rate, this is the best I can do for you."—Collier's Weekly.

IT WAS NECESSARY.

Two gentlemen met on the street one day. One wore the badge of mourning, a weed on his hat. His friend grasped his hand and exclaimed: "Oh, George, I am so sorry to hear that you have buried your dear wife."

The man with the weed thanked him and murmured something appropriate. "Yes, yes; I am so sorry, George, to hear that you have buried your wife!"

The bereaved one looked a trifle annoyed, but thanked him again.

"Ah, George, you know—I—I—I am so sorry to hear that you have buried your wife!"

The exasperated widower almost shouted:

"My heavens, man, I had to! She was dead!"—Philadelphia Inquirer.

A Missouri girl laughed so excessively while trying on a new gown at her dressmaker's, last week, that she went into convulsions, and the physicians are greatly puzzled as to the cause of the outbreak. Perhaps the featherbone tickled her.

THE COLORADO MEDICAL JOURNAL

AND WESTERN MEDICAL AND SURGICAL GAZETTE.

A Scientific Medical Journal, Published in the Interest of the Profession of Colorado and Adjoining States. A Truly Local Journal.

A Journal of Science, of News and of Medical Lore.

VOL. VI.

DENVER, COLORADO, MARCH, 1900.

No. 3.

ORIGINAL COMMUNICATIONS.

Problems in Rural Sanitation.*

BY J. TRACY MELVIN, M. D., SAGUACHE.

There are many things with which we become so familiar by daily contact that we lose sight of their imperfections and fail to continue in our efforts to improve them. A broken window pane that at once attracts the attention of a stranger is often so familiar to those who live in the house that they may all forget its existence. So with our problems in rural hygiene. The elementary, primary principles are so constantly disregarded by the great majority of the people that physicians themselves too often overlook this element in handling their cases.

In 1897 your committee on sanitation embodied in their report a reference to a few of these questions, and I would avail myself of this opportunity for presenting to you some further thoughts along the same lines.

The pollution of our rural water supply presents a problem no less vital than that which confronts urban communities, although it is well nigh impossible to impress its importance upon the people except in the face of

severe sickness. Our usual supply is from open wells, and therefore presumably pure. Chemical examination, however, of the water from village wells, and even from those of isolated ranches, often shows a surprising amount of unsuspected pollution.

Nearly all our wells in the mountain districts are very shallow, varying from six to sixteen feet in depth, and are usually dug through loose alluvial wash, then a stratum of clay or adobe, and then through sand or gravel to the water bed. Fluids percolate through the surface soil very readily, and, finding the well the only opening through the subsoil, discharge into it drainage from a wide area. We usually find the country well most conveniently located for this purpose; often but a few feet from the stable yard, and but a short distance from the outhouse, with probably the kitchen drain in close proximity. How can it fail to become contaminated? Very often in our villages you will find all of these factors within thirty feet of the shal-

* Read before the Colorado State Medical Society, June 20, 1899.

low well. Then, too, the yard must be often irrigated during the summer; after each time it is noticed that the water in the well is higher than before, proving the fact of surface drainage. Is it surprising, under such circumstances, that we constantly find in this water an excess of chlorides and of albumenoid ammonia? That all of his family are not sick all of the time, is the first argument the farmer uses to show that the chemical tests are fallacious.

Certainly the partial filtration, the more or less rapid current of the underflow, usually does prevent the contamination from becoming excessive; and perhaps, too, the constant use of a slightly contaminated water accustoms the system to its use; for we find most of the cases of summer complaint and diarrhoea, and even of typhoid, which are traced to this cause, occur in those who recently have commenced to use the water, or among residents whose vitality is lowered from other causes.

There is a too prevalent custom in some sections of the state of depending upon the irrigation ditches for water for drinking and domestic use. The danger in this is apparent, and no small proportion of our rural typhoid is directly traceable to this cause. We should not fail to impress this danger upon travelers as well as residents, for while the clear running water of many of these ditches seems inviting on a hot day, yet we know that running water will not purify itself to anywhere near the extent that it was formerly claimed to do; and how much less could we allow any such claim for our sluggish irrigating ditches, as they meander through ranges frequented by large herds of domestic animals.

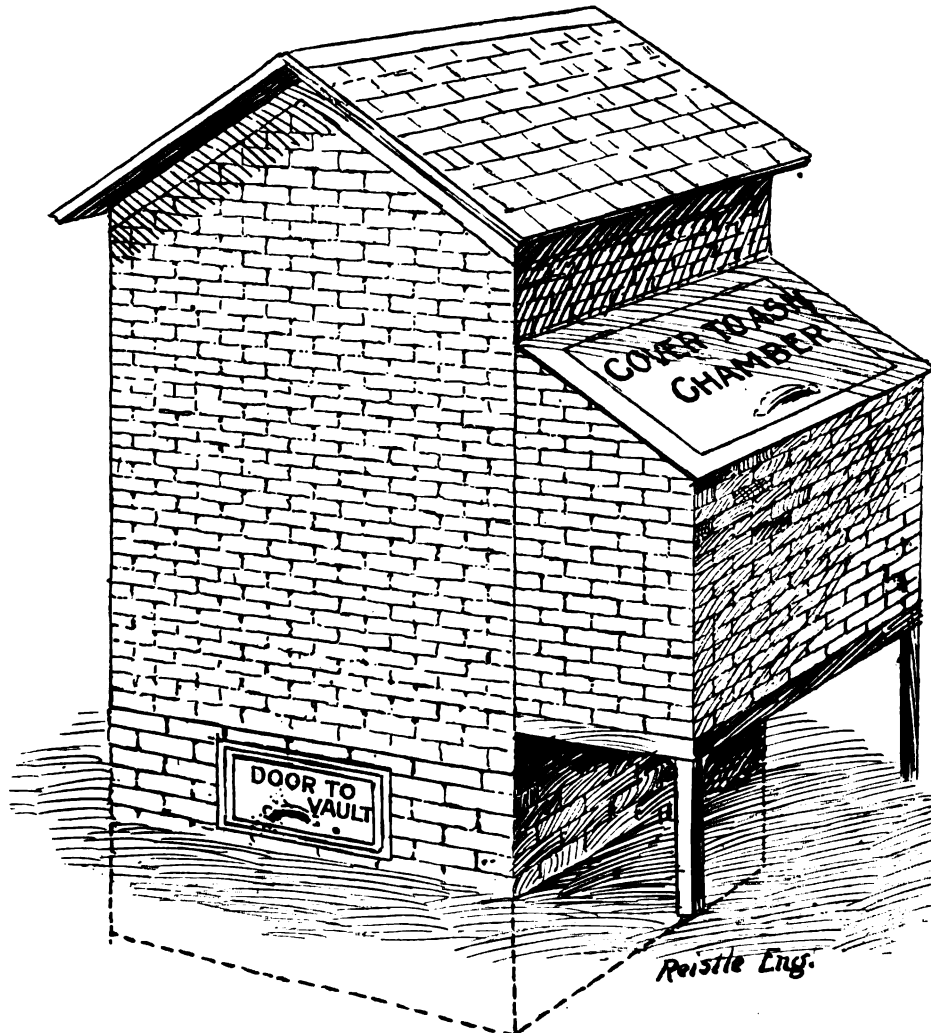
Chief, however, among all the offenders against public health, as well as against public decency, is the universal country outhouse nuisance. This I believe to be responsible, directly and indirectly, for more ill health in the country than any other one cause. It is usually unprotected, exposed and often dilapidated, thereby repelling a prompt attention to nature's calls. With usually nothing but a shallow hole dug in the porous soil, they poison air and water in every direction for many feet, even to such an extent that in the hot weather their vicinity is unbearable. Why intelligent, civilized people persist in continuing such a relic of barbarism without the most strenuous efforts to remedy it, is past my comprehension.

The greatest losses to the American army during the late war were not due to the enemy's bullets, but because an ignorant and careless volunteer soldiery, with the indifference bred into their minds by a life of constant familiarity with this nuisance, could not possibly be made to realize in a few short weeks of military instruction that an unprotected privy vault was more deadly than a gatling gun, but so it proved; and if now the American people in country districts will learn this lesson, the startling death roll from Camp Thomas and other military camps will not have been in vain.

To abolish the outhouse is impossible, for a water supply and sewage system are practically out of the question in rural communities. They can, however, be made less repulsive by educating the people on every suitable occasion to bestow more care and attention upon them. Many plans have been hesitatingly advanced for lessening the nuisance, but because they have not been persistently and forcibly kept

before the people they have been misunderstood or carried out in a half-hearted way that led to early discouragement and dissatisfaction. The regular addition of limited quantities of slaked lime and of lime water to the

material on hand and the constant attention necessary. Dry earth kept in suitable containers, and added to the dejecta by hand or by automatic contrivance, has been largely experimented with and been partially suc-



REAR VIEW OF DRY ASH CLOSET.

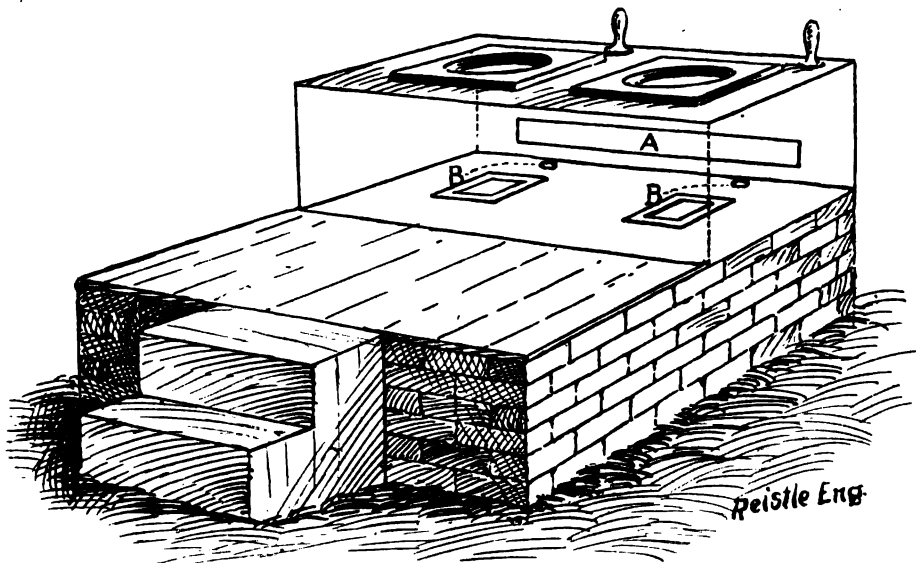
contents of privy vaults and cesspools has proved wholly satisfactory in public works where sanitary conditions receive careful attention. In private work, however, it is seldom practical, because of the difficulty in keeping the

cessful. It is the basis of all the patent dry earth closets, which, although they work well, have not met that favor which they deserve. This has been due to the fact that the people have not been educated in a thorough

knowledge of the fact that dry earth of almost any kind will desiccate and disinfect a large quantity of dejecta. A further reason is found in the fact that they all require a certain amount of intelligent attention and care, a thing which the average American man or woman will not give to any contrivance of this nature. Still the fact remains that for those who will take the trouble of caring for them, the dry earth closet may even be installed

isfactorily that a number of my friends and patients have duplicated it, and, as it may be built by any mechanic in any community, I would suggest it as a solution to this problem:

First an ordinary sized brick vault is built and cemented on the inside. The total depth should not be over four feet, half below the ground and half above. A frame with drop door about 16 inches by 3 feet is built into one side of the vault above the ground,



INSIDE VIEW OF DRY ASH CLOSET.

A.—Opening from Ash Chamber.

B. B.—Openings in false bottom with trap-door opening downward.

in the house, the same as the water closet in the city, to the great convenience of many families.

Ashes, either wood or coal, are often used in the place of dry earth, but the handling of them is unpleasant, although they are even more effective than the earth. Ashes are a constant waste product of every house. I was led several years ago to adopt a contrivance whereby they could be utilized for this purpose with little expense or trouble. It has worked so sat-

isfactorily that a number of my friends and patients have duplicated it, and, as it may be built by any mechanic in any community, I would suggest it as a solution to this problem: First an ordinary sized brick vault is built and cemented on the inside. The total depth should not be over four feet, half below the ground and half above. A frame with drop door about 16 inches by 3 feet is built into one side of the vault above the ground,

would pass at once through this opening into the bottom of the vault. We therefore take a board of the same size as the seat board, with openings corresponding to those of the seat board and closed on the under side by trap doors fastened with strong spring hinges, and fit it into the space beneath the seat board and about on a level with the floor. This brings it two inches below the opening from the ash chamber. Ashes now poured into the ash chamber can only pass down to this false bottom, and when this is covered two inches deep, or to the level of the opening from the ash chamber, ashes will cease to flow even if the ash chamber is filled to the top. Any deposit now falls into this bed of ashes immediately over the trap. A sash cord fastened to the free edge of this trap and passing backward over a pulley and up to a handle above the seat board enables one to quickly drop the ashes and deposit to the bottom of the vault, the spring hinges close the trap, ashes will now automatically flow in up to the former level, and all is ready for a repeated use. This false bottom should be covered with zinc, and an ordinary fire hook should be kept to assist in spreading the ashes should they for any reason become clogged.

An improvement upon this single board for a false bottom is to have the bottom but eight inches wide, with sloping sides about twelve inches high attached, the whole lined with zinc and fitted up under the seat board. This form cleanses itself more readily. Thus without odor, special attention or nuisance, it will automatically continue to dry, disinfect and remove all discharges throughout the year. Once or twice a year the contents of the vault may be removed, when it will be

found that there is absolutely no odor, moisture or offense of any kind, which is what prevents ordinary vaults from receiving proper attention. The desiccating and deodorizing power of ashes, properly applied, is marvelous.

In conclusion, we would call your attention to the fact that the proper solution of nearly all the common every day problems connected with rural sanitation depends upon the continuous education of the people. The people at large are not going to intentionally jeopardize their own health, and if convinced of a danger will usually seek to remedy it, but this constant educational work must begin in every room of every public school, and must be continued, line upon line, both by written and spoken word, throughout after years. Otherwise daily familiarity with the evils will breed proverbial contempt for them; and, as we can have no sanitary inspectors or plumbing inspectors or any other law-made investigators of rural sanitary conditions, it depends in great measure upon each one of us to constantly strive by public and private instruction to impress upon all within the sphere of our influence the vital importance of these questions and to point out the better way, not forgetting that the simplest, plainest, most elementary principles of hygiene are often the ones most frequently violated.

Dr. H. B. Moore, a well-known physician of Colorado Springs, died of pneumonia February 20. He was born in Maine in 1864 and came to Colorado Springs ten years ago. He has been married eight years and leaves an aged mother in New York, a sister and wife and two children.

Practical Methods of Detecting the More Common Pathogenic Bacteria.

By WM. C. MITCHELL, M. D.

Although we have a long list of diseases which are recognized to have as their causative factor specific bacteria, yet, in so far as the diseases of man are concerned, a rapid technique, suitable for diagnosis early enough to be of value in a given case, has been practically successful in but four or five diseases.

In times of epidemics, such as several countries are now having with influenza and bubonic plague, and as was the case several years ago with Asiatic cholera, especial laboratory facilities have been kept in readiness by the municipalities of the countries concerned, so as to enable the laboratory workers to place the given micro-organisms under conditions by which their biological characters could be ascertained in twenty-four to forty-eight hours. These are exceptional instances, however, and under ordinary conditions these diseases would take as long as most others to establish their identity bacteriologically. But in the following four diseases, which are of frequent occurrence in every general practice, bacteriology offers an easy and a ready solution to the oft-times perplexing question of diagnosis. These diseases are tuberculosis, gonorrhoea, diphtheria and typhoid fever.

The methods and technique of examining sputum for tubercle bacilli are familiar to every one and need only be touched upon here. A rapid diagnosis may be made by selecting a suspi-

cious looking portion of the sputum and staining it with carbolized fuchsin solution. In an early case, the portions of a sputum which are most prolific of tubercle bacilli are the small greenish-grey purulent masses which are so conspicuous in some sputa. Carbolic fuchsin solution, according to Ziehl, consists of

Fuchsin	1 gm.
Carbolic acid cryst.....	5 grms.
Alcohol	10 c. c.
Water	100 c. c.

Dissolve the fuchsin in the 10 c. c. of alcohol and the carbolic acid crystals in the water and then pour the mixtures together. Filter.

When the preparation has been stained with this mixture, it is treated with a 25 per cent. solution of a mineral acid, which has been colored with a counter stain, usually methylene blue. Gabbett's formula is

Sulphuric acid C. P.	25 c. c.
Water	75 c. c.

When the reaction between the acid and water has subsided, add 1.5 gm. methylene blue.

This acid solution removes the stain or "decolorizes" all of the preparation except the tubercle bacillus. We then have the bacilli stained red against a blue background.

It should be remembered, as Nuttall has shown, that not all tubercle bacilli retain the fuchsine with the same tenacity, and, when there are only a few tubercle bacilli present in a specimen,

this acid solution may readily decolorize the bacilli if they have been stained by the quick method, and thus they may easily be overlooked.

A method which takes a little longer, but which gives more trustworthy results, is to soak the cover-glass, fixed in the usual way, in an aniline water solution of fuchsin for twenty-four hours. This solution is made by adding 11 c. c. of a saturated alcoholic solution of fuchsin to 100 c. c. of aniline water. After a twenty-four-hour bath in this mixture, the bacilli will hold the stain much better when subjected to the acid decolorizer. The aniline solution has to be made up fresh every two or three weeks, but otherwise the method is executed just as in using the carbol-fuchsin and gives much more safe results. In cold weather the stain and the cover-glass should be set in a warm place, as in an incubator, the warmth aiding in fixing the dye.

An extremely important point in the examination of a sputum in a suspicious case, seen in the very earliest stages of the disease, and when the bacilli, if present, would be present in small numbers only, is the proper use of one or another of the concentration methods. One that gives excellent results is as follows: To every half ounce of sputum add one-half dram of a mixture of equal parts of pancreatin and sodium bicarbonate. The mixture is then placed in an incubator for four or five hours, until it is digested. Neither the elastic fibers nor the tubercle bacilli are interfered with by this process. The vessel and its contents are then removed, and the residuum obtained either by the centrifuge or by sedimentation is stained and examined for the tubercle bacillus. It is

often possible to detect these bacteria by this method when a careful and painstaking examination by the other methods has failed to reveal them.

In reference to the microscopical examination in cases of suspected gonorrhoea, there are four cardinal points to be borne in mind: 1. The morphology of the gonococcus. 2. The position of the specific micro-organism within the pus cells. 3. The fact that the gonococcus decolorizes when treated by the Gram method. 4. The characteristic grouping of these organisms.

In a case of acute discharge, the diagnosis of this disease microscopically presents no difficulty, no matter what stain is used; but in case of chronic urethritis, and especially when a patient desires to marry or renew suspended marital relations, one is never justified in giving an opinion unless the Gram method has been used. The details in technique of this most important characteristic of the gonococcus are as follows:

The preparation, carefully dried and fixed in the usual manner, is immersed in a mixture composed of 11 c. c. of a saturated solution of gentian violet added to 100 c. c. of aniline water. The specimen is immediately colored intensely, and two or three seconds suffice for the staining. Then the preparation may be washed and examined in water. If organisms with the typical morphology of this micro-coccus are discovered, the cover-glass is removed and placed in a solution of iodine and iodide of potassium for two or three minutes. The exact composition of this solution is: iodine 1 part, iodide of potassium 2 parts, water 300. When the slip is removed from this solution it is given two baths in absolute alcohol, about one minute in each bath.

When the specimen is reexamined, if the organisms first seen were gonococci, they will have become completely decolorized.

I have found it useful to lay three or four cotton fibres on the cover-glass when spreading the specimen and to fix these with the preparation. This gives one, as it were, several places of well-known topography in the various fields which he will have to again place under his vision so as to be sure that he is observing the same fields in which he demonstrated the stained diplococci.

The gonococcus is an extremely difficult organism to cultivate, and since we are largely dependent on, as it were, the physiological reaction between the protoplasm of this micrococcus and the various stains, one is never justified in making a diagnosis of this important disease bacteriologically without having exhausted all the means at his command. When one considers the long list of complications which this micro-organism often brings in its train, such as sterility, lifelong blindness for a helpless offspring, gonorrheal rheumatism, a pericarditis which may be fatal, and the ever multiplying pelvic troubles of the female, it behooves the physician to be as absolutely sure as the best methods at his hand will allow him to be, before he gives a patient with a chronic urethral trouble permission to marry. The Gram method is not difficult. It entails a certain amount of time and skill, but it is within the reach of every physician who does microscopical work.

The explanation of the Gram stain is that the protoplasm of the micro-organism, the basic aniline, and the iodides form a compound which in

the case of the gonococcus is soluble in alcohol. In numerous other bacteria, as, for example, the pus cocci, the compound formed is insoluble in alcohol and the cocci retain their stain.

In protracted cases, particular attention should be given to the shreds which appear in the urine, as these are composed of pus and epithelial cells and often harbor the gonococci. These are to be examined as carefully, as earnestly, and as repeatedly as one would examine a sputum for the tubercle bacilli. Pus cells containing these organisms may be often demonstrated in the residuum of the centrifuged urine.

In the examination for the diphtheria bacillus we are compelled to go a step higher in bacteriological technique and make use of cultures. Here, fortunately, thanks to the tireless research and the brilliant results of Prof. Löffler's work, we have a medium which is practically a specific for the growth of the diphtheria bacillus. The inoculated tube, when placed in the incubator, is ready for examination on the following morning, when it becomes simply a question of familiarity with the form or morphology of the diphtheria bacillus.

Some confusion exists as to the differences in form between the genuine diphtheria bacillus, the pseudo-diphtheria bacillus of Hoffman, and also between the genuine organism and the xerosis bacillus which is found originally in a disease of the eyes with this name. When there is an important doubt about which micro-organism is under consideration, a culture of the organism in bouillon will place it in its proper category, as the genuine diphtheria germs give an acid reaction, which again becomes alkaline,

while the "pseudo" forms do not change the reaction of the medium.

Guinea pig inoculations will also generally settle the matter, as both the "pseudo" forms and the xerosis bacillus are non-pathogenic for these animals.

Typhoid fever is a disease which has been known since 1882 to have as its special etiological factor the bacillus typhosis; yet so difficult is this micro-organism to isolate from the feces, that until within the past four years the knowledge of this specific bacillus has been of as little practical use in the diagnosis of typhoid fever as if it did not exist. From the time of the discovery of the typhoid bacillus until to-day there have been over 365 different media devised for the isolation of the typhoid bacillus from stools, but not one of them is of sufficient practical utility to be of aid early in the diagnosis of this oftentimes difficult disease.

With the advent of the Widal test into clinical laboratory methods, this state of affairs has been changed. The Widal test offers a method by which typhoid fever can be diagnosed in from 90 to 96 per cent. of cases. Continued use of the method in the laboratories has shown that the method is the most reliable test which has yet been offered for the diagnosis of this disease. In a recent article by Dr. Abbott, of Philadelphia, the claim is made that there is 3 per cent. more of error in using the dried blood method than in using the serum. This statement is borne out by other observers.

In a series of cases examined in private work and at the Denver Bureau of Health laboratory, out of fifty cases which were finally thought to have been typhoid fever, the Widal reaction was obtained in forty-four cases. This

gave a per cent. accuracy of 88. Out of forty-two cases which were suspicious at first, but were finally diagnosed as not being typhoid fever, there were forty-two negative results, giving a per cent. accuracy of 100 in the negative cases.

The method of conducting the test is as follows:

From stock cultures of the typhoid bacillus which are kept growing on agar-agar, inoculations are made into bouillon daily or whenever it is desired to make the test, so that one shall have on hand a pure culture of a 12 to 20-hour-old bouillon culture of this organism. If the serum from a typhoid case is given for examination, one part of the serum is mixed with ten parts of the culture, and the mixture is examined in the hanging drop under the microscope for agglutinations. If dried blood is to be investigated, one part of an emulsion of the blood in water is mixed with five of the culture and examined in the same way. This is the easiest and the only practical bacteriological method of examination of a case of typhoid fever at the present time. A large number of scientists, however, are still at work endeavoring to perfect methods by which the bacteriological examination of typhoid fever shall eventually be made as easy as we now have it in cases of tuberculosis, gonorrhoea and diphtheria.

Mary Steinhaus, 16 years old, who puzzled medical experts of New York and Philadelphia by sleeping nineteen days, has become a raving maniac and is in Bellevue hospital.

There are now ten deaconesses at work in the Colorado field.

Preliminary Remarks to the Discussion of Tuberculosis.*

By DR. C. DENISON, DENVER, COLO.

As fundamental to the consideration of the five subjects for discussion, proposed by the Medico-legal Society (especially the second, "The Most Successful Methods of Treatment"), I wish to draw attention to the fact that the basis of judgment at the present time is defective. Unless this is remedied, any conclusion will be likewise defective and unsatisfactory. This defect of judgment arises from the premise that the bacillus of tubercle is the sole cause of tuberculosis. Probably 90 per cent. of medical men now living rest their faith in treatment upon this belief. The function of the *seed* is allowed almost to ignore the condition of the *soil* as a causative factor in tuberculosis. Consequently, the *origination* of the complex disease called consumption is not understood or is practically disregarded. The security which the physician feels in not finding the tuberculosis germ in the sputum is unfortunate, and his possible self-deception invalidates his diagnosis. The right which a patient has to a more fundamental regime is denied him, and thus he is made to miss a most important avenue of cure—that of prevention.

The point I want to emphasize is, that the matured bacilli do not appear until late in the disease. This latent condition of the germ, or a like effect, is manifest in adenoid tissue and scrofular gland growth.

The demonstration of a blood dyscrasia by reaction in tuberculosis to the Widal typhoid fever test¹ is remarkably suggestive of how limited our knowledge of the pretubercular state is. It encourages the hope that new and definite means of diagnosis will be forthcoming, other than the tuberculin test. This latter valuable diagnostic means, however, is quite sufficient to make known these scrofular and other proofs of the tubercular dyscrasia long before there is any ocular demonstration of the germ. Therefore, I submit that the subject should be divided, namely, into, first, tuberculosis before microscopic proof of the existence of the mature germ, and second, tuberculosis after such proof. Then under such a ruling most all of the "Methods of Treatment" at present in vogue can be relegated to the second division, just named, and with few exceptions are confined to the second and third stages of the disease, because usually it is only during the breaking down of the tuberculous tissue, i. e., during these two, the softening and excavation stages, that the germ evidence is found. At this period in treatment we are then dealing with *results* always accompanied by a certain degree of auto-infection. For this advanced condition and its complexi-

¹ As shown by the experiments of Dr. S. H. von Ruck, described in the October number of the "Journal of Tuberculosis."

*Written for the Tuberculosis Congress held in New York, February 22, 1900.

ties, I hold that the best effects of treatment will, and do come, from a *combination of methods*, adjusted to the individual's needs.

The third of the five problems announced "the importance and necessity of individualization" always has to be considered. Individualization helps us to determine the proportion of good to be expected from the various elements of the above combination of treatments.

From my long experience, which I have summed up in my paper on the "Modern Treatment of Tuberculosis,"² I claim more than half of the good accomplished results from (1) climate, (2) exercise, and (3) the specific or anti-toxin method. The first and last of this trinity, climate and anti-toxins, I propose to take up when your fourth and fifth subjects are discussed. The argument for the other, "exercise," is set forth in articles³ which seem to be so incontrovertible that no opposition has been shown to their general conclusions.

The consideration of tuberculosis before the advent of the mature germ introduces the most fruitful field for investigation so far as the final eradication of tuberculosis is concerned; for here a cure is possible without leaving the damaging results characteristic of the arrested second and third stages. If we could only have as convincing proof of the existence of

the tubercular and first stages, as of the second and third stages, and medical men would cease to limit their sphere of action by the meagre knowledge of the bacillary germ, then the way would be open for the much-needed prevention. It is unfortunate that our means of diagnosis are as inefficient and limited as they are, yet enough can be known through improved physical diagnosis, close measurements and individualization, with the tracing of defective genealogy, imperfect functioning, abnormal blood aeration and other symptoms of degeneration, to bring to light and within control this insidious disease.

A vital subject which immediately presents itself is: *What are the histological changes of the tissues, or the biologic or chemical changes of the body fluids which explain the susceptibility to tubercular infection?*

I wish you might urge this question upon the specialists in biology, so that after due investigation and on another similar occasion this important matter can be determined.

To recapitulate, the chief point here raised is this: The fact that tubercle bacilli are not or can not be found in expectoration or in adventitious growths, as adenoid glands, is not conclusive proof that tuberculosis does not exist. To conclude otherwise would be practically to ignore the latent or pretubercular and nearly all of the first stage of the disease, the most important periods, because then it is curable by preventive measures. The advent of the germ should not, therefore, be the starting point for a tuberculosis congress. As the initiative of tuberculosis, then, the germ is a delusive barrier to right judgment and possible prevention. It is more an effect of that

² Read at the 1898 meeting of the A. M. A., in Denver. See Journal, September 21, 1898.

³ "The Advantages of Physical Education as a Prevention of Disease." Read before the American Academy of Medicine at Denver, June, 1898.

"Exercise for Pulmonary Invalids," Congress of Medico-Climatology of World's Fair, June, 1893.

"The Air Pressure In and Exhaler," from New York Medical Record, February 10, 1894.

degeneration or slow process of death which must be considered as fundamental. Do we have to admit that it is because of our ignorance that the human race is not the ideal one God intended? Yes, it is better to acknowledge that we do not know the cause than to assume a false basis. Let us give a new definition to consumption. *It is a degeneration or slow death, due to the vitiation of the blood, generally produced by defective ventilation of the lungs, a prominent and advanced symptom of which is the bacillary germ of tuberculosis.* Now, admit this definition, and you must go back to the mortifying stage; to its source, namely, to the dyscrasia, which is a *sine qua non* of its existence. Evidently this dyscrasia or degeneration is due to some result of our civilization; for the domestication of animals (as the housing of cows) and the civilization(?) of the savage (as of our American Indians) both coincide with our own limitations as to insufficiency of breathing space. Trace down this association of effects to a unified explanation, and you arrive at a species of auto-infection or self-poisoning due to re-breathing impure air. It matters not whether that admixture of good and bad air is a confined or stove-heated atmosphere, or, more likely, produced in an unventilated lung. The result is the same, namely, a dyscrasia or susceptibility to an additional infection by the bacillary germ. Have perfect pulmonary ventilation, no breathing of impoverished air, and tuberculosis will sink into numerical infrequency. It is almost too great a blessing, this knowing how and what air to breathe, for the human race to attain it yet. The degeneration which is engendered by our ignorance of breath-

ing properly is effectually perpetuated by inheritance. Our difficulties in remedying this dyscrasia or preventing this degeneration are thereby so much increased that I fear it will take years of work by zealous tuberculosis congresses before that education, which must initiate and sustain legislation, will be sufficient to cope with this tuberculosis evil. It was all right for Pasteur to say "It is in the power of man to cause all parasitic diseases to disappear from the world," but the eradication of the bacillus of tubercle will not come through the superficial legislation that simply seeks to control(?) expectoration or limit infection from animals. No; the education we need, which alone can be the basis of right legislation, must be more fundamental. The importance of physical development as a basis of health, incorporated into our education and lives, is not duly appreciated. If we only knew how and what air our Creator intended us to breathe and then acted on that knowledge, there would be very little pulmonary consumption hereafter.

The tendency of people to concentrate in cities, and the faulty architecture of our homes and public buildings, are important subjects yet to be duly considered.

These are a few of the thoughts which lead to the denial of the position, believed in by the mass of medical men, that the bacillus of tubercle is the sole cause of tuberculosis. The question, then, is a legitimate one: Would we not reach desirable prevention sooner by considering that germ a result rather than a cause?

But there is another even larger subject which, it seems to me, it is the special function of a medico-legal society to elucidate. This investigation is

intimately associated with that named above, and is one of, if not the most vital of, the problems of this tuberculosis crusade.⁴

It is nearly comprehended in the following: *What are the legislative and educational provisions possible to suitably change the prevalent degeneration, and its heredity, which now dwarfs civilization and favors tuberculosis?*

This is the theme of themes for collective minds to settle. Not a congress or legislative body anywhere but can gain inspiration from it. Not a university, college, seminary, academy or even a common school but can be instructed by it. Not a labor or religious

organization, not a factory or workshop on this round world but will feel the radiance of the light which may emanate from its solution. Let the usual counterbalancing of judgment by judgment, the simple putting on record of diverse personal opinions and experiences, not be the limit of the achievements of this congress, as has too often been the case with other similar discussion of this tuberculosis question. Let this body here take the initiative to inaugurate a future discussion of this basis or determining theme. Thus let us hope the way will be open for the required restrictive marriage and social laws, the incorporation of physical development into every educational and wage-earning phase of life, so that this tuberculosis crusade may be crowned with success.

⁴"The Tuberculosis Crusade and Its Problems," by the author, giving 44 necessary subjects to be elucidated. *Journal of Tuberculosis*, October, 1899.

The Etiology of Acute Diffuse Pneumonia.*

By WM. N. BEGGS, A. B., M. D.

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(Continued from last month.)

ETIOLOGY.

As a general rule it may be said that the direct cause of either of the foregoing types of pneumonia is to be found among the pathogenic bacteria, although the irritation of chemically irritant gases or the aspiration of chemically irritant liquids may produce catarrhal pneumonia without any bacterial agency being demonstrable.

A striking characteristic is the number of micro-organisms which have the power of producing pneumonias. While the diplococcus lanceolatus of

Fraenkel-Weichselbaum is by some regarded as the exclusive bacterial cause of the typical croupous pneumonia, it is generally acknowledged that this disease may be produced by a number of others, among them Friedlaender's bacillus pneumoniae, the streptococcus, etc. The same holds true of catarrhal pneumonia. From this we are justified in concluding that in neither can we assert a strict specificity of disease.

When we consider the individual bacteria we are met with a like lack of specificity of their pathological results.

*Read before the Colorado State Medical Society, June 20, 1899.

Thus the streptococcus lanceolatus of Fraenkel-Weichselbaum is unquestionably a very frequent (according to some probably the sole) cause of typical croupous pneumonia,⁸ a very frequent (in about 50% the sole) cause of catarrhal pneumonia, pleurisy, endocarditis, peritonitis, meningitis and ulcus serpens corneae, and an occasional cause of nephritis and perinephritis, metritis, pyosalpinx, strumitis, parotitis, amygdalitis, arthritis, osteomyelitis, periostitis and abscesses. Some regard it as identical with the streptococcus intracellularis found in cerebro-spinal meningitis. In animals some of the foregoing affections may be produced, but it usually gives rise to septicaemia. Therefore it may be readily seen that it has no specific pathogenetic effect either as to locality or tissue affected or the anatomical result, in one case giving rise to a croupous inflammation, in another to catarrhal, in a third to phlegmonous. It would seem that the organ to be affected is the one having the greatest predisposition at the time of infection. This micro-organism is found generally intracellularly, but also extracellularly at the site of affection. It may also be found in the blood and sometimes in the urine and milk of the affected patients. In cases of pneumonia it is to be found in the sputum, thereby rendering microscopic examination an aid in diagnosis. It has been observed in the normal lungs and in the secretion of bronchitics. It is estimated that it occurs in the oral cavities of about 30% of all human beings. To this point I shall revert later.

⁸ This, the general view, is not undisputed. Leichtenstern says that even now the apparently most certain establishment of the causal agency of the streptococcus lanceolatus is not as firmly founded as is most generally accepted.

The bacterium pneumoniae of Friedlaender is doubtless the cause of a small percentage of the cases of croupous pneumonia. It can likewise produce catarrhal pneumonia, bronchitis, and is occasionally found in various kinds of inflammations in different organs. It also sometimes gives rise to pyaemia and septicaemia.

The multiplicity of organs affected and of forms of inflammation produced by the streptococcus pyogenes is so well known as to render any further expatiation on the subject unnecessary. Suffice it to say that a considerable percentage of cases of catarrhal pneumonia, especially those complicating diphtheria, owe their origin to it, and that in croupous pneumonias it occurs specially in the atypical varieties.

What was said of the streptococcus pyogenes as regards the great number of pathological processes produced by it holds true also of the staphylococcus pyogenes aureus. It may give rise to purulent, catarrhal, or fibrinous inflammations of the most varied organs. It may occur as the cause of either catarrhal or croupous pneumonia.

The bacterium coli commune, as well as leading an apparently harmless existence in the intestinal tract of all human beings, may give rise to exceedingly serious inflammations of the most varied sorts. It causes peritonitis, nephritis, pyelonephritis, perinephritis, systitis and urethritis. To it have also been ascribed dysenteries and cholera nostras as well as puerperal fever. Of course it can not leave the lungs alone, and has been observed in lobar pneumonia (Kreibich), croupous pneumonia (Klein, Moeller), and in asthenic pneumonia (Aufrecht).

The tubercle bacillus, in addition to producing the characteristic neoplastic

growth, the tubercle, in the most varied tissues and organs, has the power also of producing more diffuse and acute inflammations, either fibrinous or catarrhal. Thus many cases of pleurisy, either dry or with serous exudate, are due to the tubercle bacillus. Also there is always catarrhal, usually desquamative, pneumonia in the immediate neighborhood of tubercles in the lungs. This may be so extensive as to become lobar, and clinically it may be very difficult or even impossible to distinguish this affection from genuine typical croupous pneumonia.

The bacterium typhi may itself be the cause of many and varied complications of typhoid fever. Thus it may be the sole cause of serous or purulent inflammations of the brain or cord or their membranes. It may also occur alone in inflammations of various organs. It is capable of producing the different types of inflammation, catarrhal, purulent or fibrinous. Some cases of croupous pneumonia in typhoid patients are due to the typhoid fever bacillus alone. Usually, however, they are complications, the streptococcus lanceolatus being the most common exciting cause.

The bacillus influenzae may produce the most varied pathological brood. It is the direct cause of numerous polymorphous affections of the nervous system, as polyneuritis, acute haemorrhagic encephalitis, purulent meningitis, etc. It also causes haemorrhagic gastritis, the most intense inflammations of the bronchial mucous membranes, and a whole host of other pathological conditions. The most frequent and the most important complication of influenza is pneumonia. For a time these pneumonias were regarded as invariably complications due to

other micro-organisms. Now it is generally recognized that in many cases the pneumonia is not a complication, but an expression of the disease. There is still a difference of opinion as to the anatomical nature of these influenza pneumonias. According to Aufrecht and Beck, they are all catarrhal. Heitler says that many cases of croupous pneumonia are the direct result of the influenza producer. Leichtenstern asserts that four varieties of pneumonia, fibrinous, catarrhal, mixed and desquamative, may be directly caused by the influenza bacillus.

Bacillus psittacosis (Nocard) has been observed in a number of cases of atypical pneumonia in which the history pointed to direct infection from parrots.

Very infrequent causes of catarrhal pneumonia are the bacillus anthracis and the bacillus mallei. Aufrecht reports a case in which he found only the bacillus subtilis.

It is certain that other micro-organisms, as yet unknown, may produce catarrhal pneumonia. Thus the catarrhal pneumonias occurring in the various exanthemata are many of them doubtless produced by the specific organism of the given primary disease. It is also exceedingly probable that there are yet many varieties of bacteria yet to be discovered as the etiological factors in many of the atypical croupous pneumonias.

In the foregoing brief mention of the more prominent germs concerned in the production of pneumonia, it has not been the purpose to describe their morphological characteristics, as they are already well known. I have rather desired to call attention to a few points in the pathogenesis of the disease. In the first place their great

number effectually disposes of the conception of either catarrhal or croupous pneumonia being morbid entities. It makes something more than an anatomical diagnosis of the disease necessary. It is essential to turn our attention to etiological diagnosis if we are to expect our bacteriological knowledge to have any therapeutic value in the future; and that finally is the test which must be applied to determine our advances in the line of practical medicine.

Again, the number of organs which may be affected by the various pathogenic agencies shows a lack of specificity as regards the selection of tissues or structures to be affected. Whether the lung, or the kidney, or some part of the nervous system, or some portion of the digestive or genitourinary tracts is to be the seat of disease is in some cases dependent upon the portal of invasion, in other cases is utterly independent of the portal of invasion and the micro-organism in question, but dependent upon a temporary or permanent vulnerability of the particular organ due to entirely independent (predisposing) factors. It is the *susceptible* organ or tissue, the one which is below par, that is affected. If it happens to be a lung, a pneumonia is the result. It might just as well have been a meningitis or an endocarditis.

Furthermore, one and the same micro-organism may produce different types of inflammation—catarrhal, purulent, croupous; there is therefore a lack of specificity of action. We naturally ask what is the factor which determines whether infection of a susceptible lung by the streptococcus lanceolatus, for example, will give a croupous or catarrhal pneumonia; or,

if it be the tubercle bacillus in question whether it will result in the neoplastic growth—the tubercle—or in a lobular catarrhal or lobar desquamative pneumonia. This is probably to be answered by the method of invasion and the number of bacteria invading at a given time, together with the rapidity of their proliferation or, what is equivalent, the amount of toxins affecting the tissue elements, whether produced slowly and in small quantities or rapidly and in considerable concentration.

Predisposing Causes.

I have already mentioned the fact that the streptococcus lanceolatus is found in the oral cavities of about 30% of human beings. To a greater or less extent the same is true of the other pathogenic germs mentioned. At various times we all inhale greater or less numbers of the streptococcus lanceolatus, bacterium pneumoniae, streptococcus pyogenes, bacterium influenzae, bacillus tuberculosis, etc. In other words, we are all carrying around with us our own sources of infection. Why do we not, then, all suffer from pneumonia and the great list of infectious diseases?

We need but call to mind the parable of the sower to have our reply: "A sower went forth to sow; and when he sowed, some seeds fell by the wayside, and the fowls came and devoured them up; some fell upon stony places, where they had not much earth; and forthwith they sprung up because they had no depth of earth; and when the sun was up they were scorched; and because they had no root they withered away * * * but others fell into good ground and brought forth fruit, some an hundred fold, some sixty fold,

some thirty fold. Who hath ears to hear let him hear."

In addition to the exciting germ there must be a condition of the individual organism which will permit the proliferation of the germ and the production of the toxins. It would seem a piece of supererogation to allude to this were it not that even to this day we find appearing in the medical literature articles in which that is the burden of the objections to the germ theory of disease and the stumbling block to its acceptance by some members of the profession of more or less—usually less—prominence.

Fortunately for the human race, its individuals have a considerable power of resistance to the deleterious agencies acting upon them from all sides and at all times. This power of resistance is not an absolute one, but one of degree. We can readily recognize that any injurious agency—bacterial, chemical, thermal, mechanical—may be brought to bear upon the strongest individual in such degree as to bring about his destruction. Ordinarily, however, these influences are brought to bear in less degree, and among many individuals exposed to the same injurious influences some succumb, many more escape with less or no harm at all. We are thus compelled to recognize a variation in the power of resistance—in the degree of immunity—and therefore also of its opposite, susceptibility, to disease. Even those who persistently refuse to permit the recognition of its influence in controversies about the germ theory of disease freely acknowledge it in the non-infectious diseases.

This predisposition may be temporary, may vary from time to time, and is affected by the most varied agencies.

Those which tend to increase it we call predisposing causes of disease.

Individual predisposition is of greater importance in the production of pneumonia than in the case of other infectious diseases generally, and the period of special predisposition may be very short. The predisposing causes may be inherent in the individual or may be extraneous.

Taking up first those inherent in the individual we have to consider race, sex, age and psychic disturbances.

Race has great influence on the frequency of the development of croupous pneumonia. Thus we find that negroes, as a rule, are specially susceptible. Again, while there is little difference in the occurrence of pneumonia in various latitudes, still those peoples who have been raised in rigorous climates, when they emigrate to more equable zones, do not as readily contract pneumonia as the natives; while, on the contrary, those migrating from a more equable to a more rigorous climate are specially apt to succumb to the disease.

It is very questionable whether sex, per se, has any direct influence. Fermi and Montesano say that the number of pneumonic cases in the hospitals, and probably in the general population, is much greater among men than among women; that absolutely more men, but relatively more women, die of pneumonia. However, there are also other influences to be borne in mind. Men are, in general, much more exposed to the other predisposing causes, and it is these which probably cause the difference between the two sexes in morbidity. This seems to be borne out by the fact that it has been observed in several instances in which women led approximately the same kind of life,

did the same work, and were exposed to the same influences as the men, that the morbidity was about the same.

Pneumonia may occur at any age. It has been observed in intra-uterine life, in the new-born, in children, in adult life, in old age. In the case of croupous pneumonia there seems to be little difference in the rate of morbidity for the decades from ten to sixty years of age. It is about twice as frequent from the fifth to the tenth year, and there is a great increase in frequency above the sixtieth year. Atypical, flabby croupous pneumonia occurs chiefly in the aged; but it often occurs also in children, among which, in general, the fibrinous pneumonia is not found in such typical forms as in adults. Catarrhal pneumonia occurs with by far the greatest frequency in early childhood. It also, especially in the hypostatic form, occurs in the aged. Between these extremes it is rare, and then generally as the result of influenza.

It has been noticed that psychic conditions have some influence in the production of either form (croupous or catarrhal) of pneumonia. Anger, anxiety and especially mental depression favor its development.

Of the extraneous agencies exposure has always been regarded as one of the most important, and its importance must be recognized now not less than formerly. Direct exposure to inclemencies (wet, wind, variable temperature, etc.) has more effect than the general effect of these climatic elements. Thus, those whose work is in the open air are some two and one-half times more frequently affected by croupous pneumonia than those working in rooms. Then, too, a very considerable number of cases are explicitly

referred by the patient to such direct exposure. Nevertheless, these have also a general effect, as will be mentioned in the consideration of climatic conditions.

Scarcely less important than direct exposure to inclement weather in the production of croupous pneumonia is the influence of excessive or unusual bodily work. This is especially the case if the work results in muscular exhaustion and increased perspiration, particularly if there be coincident carelessness in cooling off. Habitual over-fatigue is also one of the important factors in the production of catarrhal pneumonia.

The inhalation of irritant gases is an important etiological element in the production of catarrhal pneumonia, especially in children. It may have this effect even without the presence of pathogenic bacteria; usually, however, they are associated with it. In this connection the frequent occurrence of aspiration pneumonia as the result of using ether as an anaesthetic must be borne in mind. The inhalation of irritant gases seems to have no effect in the production of croupous pneumonia.

A certain small and very variable percentage of cases of croupous pneumonia has been referred to traumatism. A noteworthy fact is that, as is also the case in cerebral injuries, the lesion need not occur on the same side as the traumatism.

Croupous pneumonia is a frequent complication of typhoid fever, typhus, puerperal fever, intermittent fever, influenza and other infectious diseases. In some of these it is simply a complication. In others it is occasionally to be regarded as an expression of the effect of the specific germ of the disease itself. It is also a not rare complica-

tion of tuberculosis. In children, rickets and scrofula especially predispose to catarrhal pneumonia. In them, too, this form frequently occurs in connection with various infectious diseases, as measles, whooping cough and diphtheria. In measles it may be a sequela or may be an accompaniment and manifestation of the disease. There may be even a rubeolar catarrhal pneumonia without the exanthem developing. Catarrhal pneumonia may also complicate burns and prolonged diarrhoeal and dysenteric affections. In adults perhaps the most frequent cause of catarrhal pneumonia is influenza, with which it very frequently occurs. In all cases of tuberculosis it is to be expected at some time and in varying extent. In the aged the hypostatic form is very apt to occur in the prolonged infectious diseases or any affection producing weakness of the heart or vascular system. Desquamative pneumonia may be secondary to measles, scarlatina, pertussis, influenza, tuberculosis and other infectious diseases.

As regards the effects of social condition in the production of croupous pneumonia, very little positive data are to be had, but the general belief is that it is less frequently met among the better classes. Catarrhal pneumonia is certainly more common among the poor. The poor nutrition, bad ventilation and unhygienic surroundings of the lower classes, with their consequent scrofula and rickets, make cachectic pneumonia far from rare among them, while it is scarcely known among the better classes. When it is found among the latter, especially if the children are a little advanced in age, syphilis may be suspected as an etiological factor.

As regards locality, any form of pneumonia may occur anywhere. There is no place free from the disease. However, there are temporary variations in the morbidity of different localities, even not far removed from each other.

Climate has no special influence on the frequency of the disease. (Hirsch.) Fermi and Montesano, in their investigations, were not able to determine that any of the single components of the weather had any definite effect, and so varied and even diametrically opposed are the opinions of the different observers as to the effects of the various elemental combinations that no positive conclusion is justifiable.

There seems to be a uniformity of opinion that there is a direct relationship between the time of year and the frequency of the occurrence of pneumonia, also that the period of greater frequency changes from year to year. In a general way it may be said that the more irregular and changeable the weather, the greater the development of pneumonias, especially if this is combined with a mean low temperature. Rapid variations in temperature, not only from day to day but at different hours in the day, especially great variation between the day and night temperatures, are of great importance. Winds also have a marked effect in the production of the disease, but the direction of the winds is of no consequence. In different latitudes the period of the year during which pneumonias occur with maximum frequency varies according to the greatest temperature variations. Thus, in the higher latitudes both are found in the spring, in the warmer regions in the winter.

The Angiotribe in Operations for Varicocele.

By LEONARD FREEMAN, M. D.

Excision of the veins undoubtedly gives better results than subcutaneous ligation in the treatment of varicocele. It is the "procedure of choice." It not only permits complete removal of the enlarged vessels with safety to contiguous structures, but it also enables the operator to shorten the elongated cord and deal radically with the posterior veins, which often form varicosities of considerable size behind the epididymis.

An objection to the open method has been the danger of the formation of a sinus leading down to the ligatures, which will persist until the offending material comes away. This may be delayed for a long time, especially as the thread always contains a number of large knots. Every one who has done many operations for varicocele has been annoyed by this occurrence, for it is true that infection is particularly apt to appear in the scrotum, owing to difficulty in cleaning the part and to laxity of the tissues.

Some six months ago it occurred to me that the objectionable ligatures could be done away with by using the angiotribe, recently so successfully employed in the performance of hysterectomy. The instrument is in the shape of a large, heavy clamp, closed by a powerful lever, and exerting a tremendous crushing force. In spite of its size and apparent awkwardness, it is easily handled and eminently satisfactory.

In operating, the veins are separated from the vas in the usual manner and folded into a loop, so as to

shorten the cord to the desired extent; then the base of the loop is seized in the jaws of the angiotribe and the veins crushed. The projecting portion of the loop is then cut away and in a minute or two the instrument removed. The proximal and distal venous stumps are found flattened into a white, coherent, ribbon-like mass, and have no tendency to become separated unless pulled upon. There is absolutely no danger of hemorrhage; the stump can be buried and the wound closed with collodion without fear. A well-fitting suspensory bandage, stuffed with cotton, should be immediately applied and kept constantly in place in order to prevent dragging of the testicle and lengthening of the cord by separation of the ends of the resected veins. I am convinced, however, that even if such separation were to occur, the cord would nevertheless eventually become shortened by cicatricial contraction. The parts soon become fixed in their new positions.

If the posterior veins in relation with the epididymis are also enlarged, they may be obliterated by simply crushing them in one or more places, a procedure much less troublesome than ligation or excision.

The operation for varicocele is thus rendered remarkably simple and expeditious. It may be completed without the use of a single ligature and with every prospect of a good result.

I first employed this procedure in the Arapahoe County hospital, September 30, 1899. Since then I have oper-

ated a number of times, the results being uniformly satisfactory. In one instance, however, on the eighth or ninth day, after the patient had been practically discharged, he succeeded in breaking open the wound through an injury, and infecting the field of operation from without inwards. Nevertheless, in a little more than a week the considerable amount of suppuration

had disappeared—a fortunate termination, which could not have occurred, it is needless to say, if a ligature full of knots had been present. In the remaining cases permanent union took place by first intention.

I have also employed the angiotribe in a case of castration with perfect satisfaction, crushing both the veins and vas deferens in one mass.

Clinical Reports.*

- (1) Operation for Carcinoma of the Penis.
 - (2) Operation for Carcinoma of the Anus.
-

By DR. EDMUND J. A. ROGERS.

CASE NO. 1.

On July 2, 1897, I operated on A. B., of Missouri, for epithelioma of the penis. His age was then 55, but he appeared to be very much older; his weight was about 150 lbs.

Previous to the time of the operation he had been trying various advertised cures and the disease, which had begun in the glans, was far advanced, almost the entire organ having disappeared, the base protruding as a cauliflower excrescence. The tumor involved the scrotum, one testicle and both cords, and extended some distance back on the urethra. The inguinal glands on both sides were involved. The patient was emaciated, exhausted, and in constant pain.

I pronounced the condition as almost hopeless, but offered to operate, chiefly that I might be able to give temporary relief from the intense suf-

fering, which was so severe that the patient preferred immediate death to its continuance.

In the operation I commenced the incision above, about one-third way above the symphysis pubis towards the umbilicus, cutting the skin and superficial tissues in two diverging lines downwards and outwards towards the center of Poupart's ligament. I then went as deeply as possible under the tumor, coming down close against the bone in the center and outward, taking all the glands possible in the mass. I then kept close to the rami of the pubic bone, down and backward, separating the crura of the penis by a periosteotome. The superficial incisions then converged toward the anus and the whole mass was turned downward and backward, the urethra being left undivided until the last. This was finally cut at a point

* Reported to the Denver and Arapahoe County Medical Society, February 27, 1900.

which left just enough of the canal to reach the perineum by the shortest route, and the end was attached at the posterior end of the incision just anterior to the anus. After clearing the inguinal region of glands the superficial tissue was freed at the sides and slid inwards and united in the median line. At the completion of the operation I feared most that I had not got beyond the diseased tissue in the urethral walls.

The patient suffered from profound and prolonged shock, but slowly rallied, and recovery was then rapid and the relief marked. He remained in the hospital until July 28, when he returned to the East. In the following December he returned for examination and I removed some doubtful tissue along the line of incision, which proved, however, to be not carcinomatous. Since then the patient reports continuous improvement, and now states that he is in excellent health and weighs 170 pounds, a greater weight than at any previous time in his life.

CASE NO. 2.

The second case that I will report was that of C. D., aged 60, of Utah, upon whom I operated on September 28, 1898, with Dr. I. B. Perkins.

The patient had a well developed carcinomatous growth of the tissues of the anus, there being much infiltration of the deep tissues and much ulceration of the superficial. The tumor involved the entire circumference of the anus and walls of the rectum, both sphincter muscles and the superficial tissues of the anus, but did not extend any distance up the rectum.

I made an elliptical incision around the tumor, removing a good margin of apparently healthy skin. I then cut

directly through the muscular floor of the pelvis as wide as possible from the tumor, and with my fingers separated the rectum and perirectal tissues from the surrounding tissues. In this way I dissected high up into the pelvic fossa, passing well up posterior to the prostate gland, but did not, I believe, open the peritoneum. I then drew the whole mass down and outward and divided the rectum as high up as I could, so as to enable the cut end to be attached to the incised margin of the skin. This left, of course, a great funnel-shaped ending for the rectum.

I got considerable suppuration in the torn pelvic fossa, especially anterior to the rectum, but drainage was free and improvement rapid. The union between the skin and mucous membrane was excellent. The patient remained in the hospital until November 10. He still reports continual improvement in his general health and in the local condition. I have not seen him since he left the hospital, but he reports his present condition as satisfactory, and that under ordinary conditions he has full control over the bowel, having complete anal control over his stools except when they are abnormally liquid.

PHYSICIANS TO PARIS.

The "City of Rome" has been chartered for the physicians of the Middle and Western states for an excursion to Europe, Paris Exposition and World's Medical Congresses, leaving New York June 30, and physicians generally are invited to join the party. For further information, address Dr. James W. Cokenower, secretary Iowa State Medical Society, Des Moines, Iowa.

THE COLORADO MEDICAL JOURNAL

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EDITORIALS.

ALTRUISM IN THE MEDICAL PROFESSION.

"What good gift have my brothers, but it came
From search and strife and loving sacrifice?"

In every community of sufficient size there is a certain proportion of the members of the medical profession taking no interest in the professional welfare. They take no part in the furtherance of professional progress. They attend no societies, they read no papers, they devote none of their time or exertions to the common medical weal. When asked about it, they very

frankly state that they have no interest in their confreres, that it is not worth their while to attend the society meetings, that it is a waste of time, that the societies are run by cliques of men not their equals, socially or professionally; that the papers are not worth listening to, being usually collations from the books, etc. These men may be aptly designated the Brahmins of the profession.

Let us inquire into the justness of their representations. Their social qualifications as compared with those of their confreres in relation to society with a capital S, we will leave entirely out of consideration. We

have no occasion to concern ourselves in the least with that.

While a few members of the medical profession may permit the question of "social salvation" to have the predominant influence on their aims and aspirations, the great rank and file will ever consider their scientific advancement and the increase in their efficiency in the performance of their mission to the public in general and their individual patients in special, as the pre-eminent object of their lives. To that end, with few exceptions, the medical societies, local, district and national, are organized, and that is the spirit actuating all medical journals worthy of recognition as such.

At the present day no man in any of the walks of life, especially in the so-called learned professions, is self-sufficient unto himself. In the medical profession that is specially true. Every physician, no matter how eminent or great he may be, no matter how brilliant his natural qualifications, is indebted to others for practically everything he knows that is of value. The original contribution to knowledge which even the greatest man of to-day may make, is but trifling in comparison with the great store he draws and has drawn from others, and which must of necessity form the foundation of his own professional achievements. He can not even have the satisfaction of being able to say that he has ever given a proportionate cash remuneration for this knowledge for which he is so dependent upon others, for the benefits which he has himself derived from others. The price which he pays for a book or a journal, the tuition he pays for general or special courses of instruction, can by no stretch of the

imagination be regarded as a proper compensation for the labor and thought expended in their production.

When he has left his alma mater his involuntary and unavoidable sponging upon others has but just begun. The diploma from no college, no matter how great its pretensions or reputation, can be regarded as a perpetual patent of scientific and intellectual nobility. He who in his college days has obtained a fair, perhaps even an unusual, amount of medical knowledge and the ability to apply it, rapidly deteriorates thereafter unless he continues to profit by the advances and mistakes of his confreres. The careful observation of only his own cases, and of such independent investigations as he might be able to carry out by himself, unaided and alone, would be utterly inadequate to prevent his being left helplessly and hopelessly in the rear of scientific progress, a shriveled and misshapen monstrosity by defect of development.

Such being the case, is our Brahmin justified in his neglect to support the local efforts to advance the profession of which he is a member? To propound the question with the explanation just given is but to furnish the reply. There can be but one.

We can also ask, Is he living up to his own best opportunities? Is he correct in his expressed opinion that it is not worth his while to attend the society meetings, that the papers there read are not of sufficient interest to repay him for the time and effort he would have to expend, and that those who come forward in such work are either no better or inferior to him in ability? An emphatic negative reply can be given to this query. We are all of us prone to underesti-

mate the ability and sterling worth of our contemporaries and our neighbors. Those whom we see in daily life, the development of whose character and accomplishments takes place under our eyes, are only too apt to suffer in our estimation in comparison with those at a distance, who, when they do appear momentarily to our view, are covered with the halo of unfamiliarity, and only whose finished work is presented for our approval; and but too frequently do we recognize our neighbor's sterling worth and ability only after his death.

Then, too, it is only by the use of our intellects that they are developed. As has been said, the diploma is no patent of intellectual nobility. He who has it and neglects his opportunities for work deteriorates and sinks into the intellectual mire. On the other hand, he who conscientiously employs the perhaps even moderate talents with which he has been endowed, makes true intellectual progress. He who at first, perhaps, can do no more than collate the work of others, if he does do that faithfully and honestly, attains an ever increasing ability to observe and draw correct inferences for himself and his less industrious but perhaps originally better intellectually endowed professional brother.

An evidence that this is true is the fact that in a community the physicians who have the most enviable reputations, who stand highest in the esteem of their confreres (and that is the true standard by which they should be judged), are the very men who are constantly working for the general professional advancement, who do find the time to attend the society meetings, and whose papers are read there

and appear in their local journals, and at whom the Brahmin's lips are curled. They may not have as great and as lucrative practices as some of their carping neighbors. That requires rather social than scientific ability. Indeed, the careful student and deep thinker is apt to develop qualities which tend to detract from his qualities as a man of the world, and thus militate against the acquirement of a large practice. He does develop, however, an ability which draws an enviable recognition from those of his confreres familiar with his work, and which suffers no diminution or injury from the covert sneers of the intellectually idle and shallow.

Therefore, in view of these facts, that all physicians are deeply and permanently indebted to others for their own scientific attainments, and that his own professional development is largely dependent upon others, it may be again urged that it is the duty of every physician to give his aid to the advancement of local professional interests. He should, without fail, be a member and attendant upon his local medical society, and a supporter of his local journal, if there be one. Then, if his means permit, he should join his state and national societies. Unless he do this to the extent of his ability he is not doing his duty, paying his debts, and living up to his own best interests.

VIVISECTION AND ITS RELATION TO THE PRACTITIONER OF MEDICINE.

The medical profession is once more made aware of Senator Gallinger's existence by the re-introduction of his old bill No. 1061, revised and cata-

logued under No. 34, for subsequent hearing by the United States senate.

It is entirely unnecessary to enter into the detail of criticism of this bill, as the reader is probably thoroughly familiar with it; nor can it be in the province of this article to discuss the reasons given by the fanatical exponents of the theories and fallacies which Dr. Gallinger presumes to defend. Only those points of relative value of vivisection to the practitioner at large will be referred to, trusting that they will be sufficient to stimulate every physician to petition the aid of his senator in blocking the passage of such an infamous and unjust measure as bill No. 34, veiled as it is by pseudo sympathy for the brute, while portraying the inhumanity and misguided judgment of its author.

The word vivisection is interpreted by the anti-vivisectionist to mean the useless dissection of a live animal, keenly aware of its own suffering, to be discarded or killed at the pleasure of the investigator. Once convinced of this glaringly cruel and erroneous idea, the imagined champion of the brute refuses to consider the scientific demands which necessitate a demonstration on a lower animal of the principles involved. No amount of explanation can cause him to believe that vivisection is other than a purposeless infliction of pain instigated by savage motives.

The saying that "where ignorance is bliss 'tis folly to be wise" is sadly at fault in this instance; could we but induce the self-thinking public to recognize the benefits to humanity which have accrued from experiments in research work in laboratories, Dr. Gallinger would be made by public appeal to convert his bill into one solic-

iting a grant of funds for furthering the work in the Bureau of Animal Industry and in those institutions which the legal enactment of bill No. 34 must primarily affect.

The practice of medicine up to the last century has been essentially that of empiricism, human life having been subjected to the prescribing of many drugs of which the definite physiologic action was unknown. "Food to one man is poison to another," is in no field so true as that of medicine; the action of certain drugs on one set of controls may be widely different on others. This knowledge alone would prohibit the experimental use of any drug on a human being, until its action had been carefully determined by demonstration on lower animals. Better is it to destroy the life of an animal than risk the life of a patient; the science of medical therapeutics precludes guesswork.

Glancing over the annals of medicine we notice how intimately the lower animal has been associated with its theories.

The Greeks discovered, while officiating at the sacrifices to the Delphian oracles, that the arteries and veins contained blood and not air, which supposition had previously been taught.

No Roman legion entered the tropical forests of Africa without apes, to whom the products of the luxuriant vegetation were fed before the soldiers were permitted to eat of them. To this day every explorer pursues unhesitatingly the same plan. Possibly the anti-vivisectionist would suggest a native African in lieu of an ape, for this fruit testing and life protecting mission.

Our first knowledge of the effects of electricity on animals was given to the world through the accidental contact of an electrode with a frog's leg, by Volta. Has not the relief gained through this valuable therapeutic agent greatly outweighed whatever pain may have been experimentally occasioned?

Let us now consider the debt of gratitude which the world in common owes to the biological investigator; this the anti-vivisectioner contemptuously ignores as the "product of useless suffering." The death list of India for 1898 ascribes the frightful mortality of 29,901 persons to snake bites, from one species or another of the venomous ophidia, also 60,000 animals from the same cause. During the past year 1899 these ghastly figures have been markedly reduced by the use of Calamette's antitoxine serum. Can any just and fair-minded, respectable being say aught against those noble workers through whose efforts such wonderful scientific results have been achieved?

Has not the life of one child rescued from the death grasp of diphtheria by the use of immunized horse serum repaid many times the pain, if there be any, imposed upon the brute?

Not only has the brute been used for the pursuance of the study of prevention and cure of diseases common to the human family, but much light has also been thrown on the obscure forms of ailments peculiar to the lower animal.

Arlooin, Cornevin, and Thomas of France, and Kit of Germany have worked out the methods now so successfully in use of preventive inoculation for black leg, a disease which up to the past few years has proved to be

a decimating factor to the stock grower. Convert the many millions of cattle which have been saved into values of the mart of trade, and compare with the insignificant cost of those used for experimental purposes: the results are almost incomprehensible. It is sometimes necessary to resort to a monetary standard in order to effect an entrance into certain human crania.

The work which De Schweinitz, Mayo and Peters, of our own country, are now following in endeavoring to immunize hogs from cholera and swine plague, would justify all necessary laboratory studies; yet Dr. Gallinger utterly disregards these honestly created efforts and desires to secure restriction of vivisection in the District of Columbia, thus placing the Bureau of Animal Industry under the surveillance of a committee consisting of two, and these two are not to be physicians.

The time is now at hand and the needs of the present so great, that they should bind all lovers of pure science in a harmonious union, which will raise a great and mighty protest against this attempted fanatical legislation.

No physician but by virtue of his profession would willingly exert his every effort in the suppression of an unscientific display of vivisection, such as was exhibited in a religious institution in Denver some time ago, when lectures were given to a set of young men on "first aid to the injured," using a dog in lieu of the customary human subject. In the larger centers of the East, where there are regular schools for instruction in this valuable branch, either a manikin, anatomical charts, or art models serve

to demonstrate the various landmarks which are of importance in emergency.

If we as a nation are to be "hero worshippers," let us be more mindful of men such as Sir Joseph Tryer, Calamette, Martin, Weir Mitchell, Sewall, and others who have unhesitatingly faced the concealed dangers of the laboratory, than bow the knee to those who sought to destroy only a human foe, and in many instances the latter but ill equipped for the fray.

Every physician should strenuously oppose Dr. Gallinger in his attempt to deprive the science of medicine of its most potent aid,—animal research,—thereby casting the profession once more into the chaotic darkness of empiricism.

SAMPLE COPY CIRCULATION.

As regards their circulation, there are different classes of journals. One continuously deluges the profession with large numbers of sample copies (in fact, their circulation consists almost entirely of sample copies), simply to in a measure substantiate their claims to advertisers of huge circulation, not as an honest attempt to build up a regular clientele of paying subscribers, as the ridiculously low rates at which they are offered, demonstrates. As may be readily concluded, this latter object would be defeated by their very profuse freedom in the distribution of sample copies.

The multiplicity of sample copies is not an advantage to any one, and does do injury. It does not benefit the journal issuing them. Journals popularly thought to belong to this class usually have a low professional standard and standing. Like dodgers, circulars, and

advice inflicted upon the suffering public gratis, they are regarded as of little value; the journal the physician looks for and reads is the one to which he has subscribed. It does the advertiser no good. The attention paid to the advertising pages of a journal will be just in proportion to the standing the journal has in its reader's opinion. If a journal is not of sufficient value to be subscribed for, and therefore read, its advertising pages are certainly not looked at. It does positive injury by tending to pauperize a certain class of physicians and to lead them into habits of carelessness and irregularity in study. There is no question but that the multiplicity of sample copies does have the tendency to make certain physicians depend upon that irregular supply for their modicum of modern medical literature, and the low estimate they place upon it when it is received tends to minimize to them the importance of regular reading and study. It is quite on a par with the "dead beat" practice to which so many physicians are the victims, with the sole difference that the shoe is on the other foot.

Another class of journals uses the sample copy as a legitimate aid in making themselves known to increasing numbers of physicians, in the hope that they may become subscribers. To this class the Journal belongs. Essentially a subscriber's journal, it desires to extend its sphere of influence as much as possible. Therefore, to a number of physicians not on our regular mailing list, this number will be sent in the hopes that they will examine it carefully, in that way becoming acquainted with the work we are doing, and will thereby be induced to become regular readers of the Journal.

We should be glad to receive the subscriptions of those interested, and will not trespass upon the indulgence of those not interested by sending them further sample copies, but will direct our energies in that direction to other members of the profession in other portions of the field we attempt to cover.

OUR ADVERTISERS.

There is, of course, room for a difference of opinion as to the character of advertisements which should be accepted for publication in a medical journal, and the relationship which should exist between the publisher and the advertiser. Without any criticism of those journals which are conducted upon somewhat different principles from those of the Colorado Medical Journal, the latter will be conducted on the highest plane. No part of the scientific pages will be for sale for any purpose or at any price. No apparently scientific communications will be accepted for counting house reasons. There is no department for "reading notices." This has for some time been the policy of the Journal, actuated by the belief that a journal which maintained this high standard for its scientific pages would be all the more appreciated by its readers, and that, reasonable care being exercised in the censorship of its advertising pages, this appreciation would also be extended to its advertisers. The past experience of the Journal has but served to confirm this opinion.

As regards the advertising pages, they will be conducted along the strictest ethical lines. The broad principle has been adopted for guidance, that the acceptance of any advertise-

ment for appearance in our advertising pages shall be equivalent to a commendation of the firm whose goods are thus announced. We may not fully endorse the firm's opinion as to the special advantages of their products, just as we do not necessarily endorse all the opinions expressed in articles contributed to our scientific pages, but the same principles will govern their appearance in both departments.

The advertisements of medicines heralded to the laity through the lay press will not be accepted by the Journal. This, we know, is not the practice of a majority of the medical journals, great and small, published in this country, but we can not agree that such products are the proper subjects for advertising in medical journals. Those who are at all familiar with the advertising pages of the Journal will have noticed the prompt disappearance of the announcement of one such preparation.

With the foregoing brief statement, we invite the attention of our readers to our advertising pages. It will be seen that they are clean, and conducted along the broadest lines of general ethical principles. Our advertisers have our approval, and we trust that our readers will feel not disinclined to investigate their claims. We are confident that any time and effort so employed will not be wasted.

STYLUS.

While the field of medical literature is full to a point of overflowing, room has been found for a new publication in St. Louis, Mo., edited under the title of "The Stylus." This little journal is a bright, aid-giving magazine, and will, without doubt, succeed in gaining the patronage of the medical fraternity.

Bulletin of the Colorado Medical Library Association.

Devoted to the interests of Medical Libraries in the West.

HENRY SEWALL, M. D., President.

LAURA LIEBHARDT, M. D., Treasurer.

CARROLL EDSON, M. D., Secretary.

CHAS. R. DUDLEY, Librarian.

No. 18.

MARCH, 1900.

Among the books just catalogued and placed upon the shelves of the Medical Library are five volumes of Nothnagel's *Specielle Pathologic und Therapie*, volume 6 of Allbutt's *System of Medicine*, volume 16 of Stedman's *Twentieth Century Practice*, volume 5 of Weyl's *Handbuch der Hygiene*, Hueppe's *Principles of Bacteriology*, Byford's *Diseases of Women*, Medical and Surgical; Thoma's *Text-book of General Pathology*, Gibson's *Diseases of the Heart and Aorta*, Lazarus-Barlow's *Manual of General Pathology*, Baruch's *Hydrotherapy*, Dudley's *Diseases of Women*, and Gerrish's *Text-book of Anatomy* by American authors.

The first four volumes that have been issued of *Progressive Medicine*,

edited by Hobart Amory Hare, M. D., and published by Lea Brothers, have been purchased by the association and are now on the shelves.

Upon several occasions lately we have seen Drs. Whitney, Munn, Edson, Hall, Beggs, Liebhardt, Mitchell, Zederbaum, Freeman, Sewall, Mann and Hillkowitz mooning around the library. As they were very quiet and orderly, no one tried to hold them up for opinions. Even Dr. Fisk made his first appearance the other evening, and likewise his escape, before he could be asked for his thoughts. Truly, we should be very glad if the doctors would give a few hints and suggestions once in a while.

ZOE GUERNSEY.

The Denver Clinical Society.

This report appears in no other medical journal.

Meeting of February 29, 1900.

The meeting was called to order by the president at 8:30 p. m. The members present were Drs. Mitchell, Bates, Guthrie, Goodman, Root, and Hoffman; the guests were Drs. Chandler and Connelly and Miss Stewart.

Dr. Gale read a paper on "Injuries to the Eyeball," containing a report of a number of cases of injuries from explosions in mines. The results were unsatisfactory, except in a few cases,

in which the youth of the patients and the nature of the injuries were favorable elements.

Dr. Goodman reported a case of tardy development of the lachrymal duct in an infant, the condition yielding readily to medical treatment.

Dr. Guthrie reported two cases of eclampsia in young primiparae, the age being under 20 in each case. One case was complicated with placenta previa. Both cases terminated in re-

covery. In the discussion following, Dr. Bates gave an interesting account of a case of sepsis in which an intrauterine douche improperly given was followed by an immediate and immense enlargement of the uterus and a simultaneous eclamptic convulsion, this seeming to prove the relationship between the convulsion and the pressure.

Dr. Bates reported a case of erysipelas made comfortable and seemingly cured by local application of yeast.

Dr. Bates moved that Dr. Mitchell be instructed to perfect the scheme of the circulating library, by having a collector. The motion carried.

The society then adjourned.

M. JEAN GALE,
Secretary pro tem.

The Denver Clinical and Pathological Society.

This report appears in no other medical journal.

A regular meeting of the Denver Clinical and Pathological Society was held the evening of February 9, 1900, at the Jackson Building, as guests of Drs. Hall, Hopkins, Waxham, Conroy and Hershey. Thirty-one members were present, and three guests, viz.: Dr. Kirkland of Fort Collins, Dr. Bles of Denver, and Dr. Libby of Portland, Me.

Minutes of previous meeting were read and approved.

The resignation of Dr. Fenn was read, and it was moved that he be made an honorary member; referred to the membership committee.

The election of Dr. Stover, to succeed Dr. Fenn, was announced by the membership committee.

Dr. Leonard Freeman exhibited a patient from whom a portion of the astragalus had been removed for correction of club foot.

Dr. Higgins presented an adult male with rudimentary clavicle.

Dr. Leonard Freeman presented a patient showing the results of an osteotomy for gun stock deformity of the elbow.

Dr. Hill reported a case of persistent backache due to prostatic urethritis.

Dr. Black reported the recurrence of the papilloma exhibited at the last meeting, two months from first diagnosis; discussed by Dr. Long.

Dr. Fleming reported a case of abortion with double foetus; discussed by Drs. Jayne and Craig.

Dr. Kickland, the birth of twins, respectively 10 1-2 and 11 pounds, by a primipara; also a case of instant death from swallowing a button.

Dr. McNaught reported a case of vesical stone; discussed by Drs. Hill and Higgins.

Dr. Perkins reported the removal of a dermoid cyst, in which no hair was adherent to the ovary.

Dr. R. B. Freeman reported a case of fatal Hodgkins disease.

Dr. Jackson reported the successful use of the "winking test;" discussed by Drs. Beggs, Black, Pershing and Wetherill.

Dr. Hall requested information as to whether the color of the pupil has

any reference to the accuracy of the vision. Discussed by Drs. Jackson, Libby, Beggs, R. B. Freeman, and Black.

Dr. Pershing corrected the diagnosis of a case reported at the December meeting, it proving to be non-syphilitic. Discussed by Drs. Beggs, Freeman, Powers, Hill, Kenny, Black and Lobingier.

Dr. Lobingier reported a case of extreme hypospadias, resembling pseudo-hermaphroditism.

Dr. Wetherill exhibited a foetus of extra uterine pregnancy without the usual symptoms of foetus being removed per vaginam; also a retained fibroid with calcareous degeneration. Discussed by Dr. Beggs.

G. E. TYLER, Secretary.

Denver and Arapahoe Medical Society Meetings.

This report appears in no other medical journal.

A regular meeting of the Denver and Arapahoe Medical Society was held in the Brown Palace Hotel Tuesday evening, February 13, Dr. Fleming in the chair. The minutes of the previous meeting were read and approved. The board of censors having reported favorably on the names of Drs. Alice Guthrie, Jean Gale, Hubert G. Wilbur, G. W. Holden and Howard F. Elliott, they were elected to membership.

The following scientific program was then carried out:

1. Address on the Physiology of Digestion, Dr. C. B. VanZant.
2. Address on Indigestion, Dr. E. P. Hershey.
3. Pneumothorax, with report of a case, Dr. Alfred C. Mann.

Under the head of presentation of specimens Dr. Delehanty presented a heart with aortic stenosis from calcareous degeneration of the valves. Only two valves were present, due to early agglutination. Discussion by Dr. J. N. Hall: This is a most beautiful specimen. It illustrates the great degree of narrowing which may exist without the appearance of any very

serious symptoms for a very long time. With a regurgitation of one-tenth the area of the vessel death usually results very rapidly, but there may be a stenosis of three-quarters of the area with scarcely noticeable symptoms. In this connection I might report a case recently under my observation. In a boy sixteen years old there was a marked aortic stenosis, but the symptoms have developed only recently. There was, what is very rare, an extremely marked thrill. We should remember that in 95 to 98 per cent. of direct aortic murmurs the murmur is not due to stenosis, but to roughening of the aorta. A question of some interest is as to the possibility of marked thrill without marked stenosis.

The society then went into executive session, after which it adjourned.

A regular meeting of the Denver and Arapahoe County Medical Society was held at the Brown Palace Hotel on Tuesday, February 27, 1900, President Fleming in the chair.

The following names were proposed for membership: Dr. Lyle Graham, Dr. David Thornton, Dr. J. A. Wilder, and Dr. J. F. Elliot.

The regular program was carried out:

1. An address on "Fractures," by Dr. C. A. Powers.

2. An address on "Practical Methods of Detecting Pathogenic Bacteria."¹

3. (a) Operation for cancer of the penis; (b) Operation for cancer of the rectum.²

DISCUSSION.

Dr. I. B. Perkins: The first case was one in which it seemed that there was nothing to be done, the involvement of the tissues was so extensive. It was not reasonable to expect that there would be no return. Nearly three years, however, have elapsed since the operation, and there has been not the slightest indication of a recurrence. It was a remarkable case, and shows that we might probably be a little bolder in our operative interference sometimes. The second case was also a very remarkable one. The carcinomatous growth was very extensive. It showed very plainly externally and it seemed to be impossible to radically remove it and yet retain control of the bowel movements. I heard from the patient this week, and the patient was in almost perfect health and has almost perfect control of the bowel. I fail to see how this can be the case; what muscle can control it. The union (a remarkable thing in the case) was by almost perfect primary intention.

¹ Published on page 82.

² Published on page 94.

Dr. Leonard Freeman: These cases seem to show that we would be justified in taking greater chances in extreme cases at times. In operating we have to consider whether it is to be for palliation or cure. In order to effect a cure it is necessary to remove every bit of the carcinomatous tissue. It is very necessary for the operation to be made early and extensive. It is a mistake to think that in an early operation it is not necessary to operate extensively. For example, in operation for the cure of carcinoma of the mammary gland it is necessary to remove all the glands, even in early operation. In rectal cases these are not so easily removed, but it is also true that they are not involved so early in the case. Then, too, when they are enlarged, it is not necessarily the case that the enlargement is a malignant one; it may be simply inflammatory.

When we operate on the rectum for malignant disease we are tempted not to make the operation as extensive as we would do if the trouble were located elsewhere, on account of the danger of destroying the patient's control over the bowel, an exceedingly disagreeable condition. Then, too, the operation is usually not made so early because as a rule the patients do not come to us early. Rectal cancer may run for months and years without symptoms enough to call the patient's attention forcibly to the necessity of intervention. For a long time there may be no pain, or at most only a sensation of weight or heaviness. The cancer may be well advanced before there is any bleeding. The patient may suffer from only vague symptoms, such as colicky pains, gas in the intestines, etc. The cachexia makes its appearance late and the loss in weight

may not be alarming. When the case is so far developed that we can feel a nodule or ulcer, or when there is much foul or purulent discharge, the diagnosis is quite easy. We should therefore always examine our rectal cases carefully as early in their history as possible.

There is an extreme variability of opinion in the text-books as to the possibility of a cure in rectal cancer by operation. A book on gynaecology, in which I was reading this afternoon—I am not certain as to the author—states that there is practically no chance. On the other hand, Koenig's Surgery gives the chances as the very best. As a matter of fact many cases are entirely cured, as is evidenced by Dr. Rogers' case. Some advocate merely palliative operations, such as slitting or curetting. Others make only colostomys. Colostomy is very valuable when the case is too far advanced for a radical operation, as it directs the feces away from the ulcerating surface.

As to cancer of the penis the same remarks can be made. We should always remove all the glands, as we can not always tell if they are involved in the carcinomatous process. We should remember, however, that if they are enlarged that does not necessarily prove that they are cancerous.

Dr. Rogers: A probable explanation of the control of the bowels is that in this case a large amount of cicatricial tissue was formed, the contraction of which enabled a small amount of muscular tissue to functionate. Almost all of the pelvic floor was removed, and, of course, it had to be filled in with scar tissue.

Under the head of reports of cases, Dr. Hall reported the case of a boy

whose heart beats in the back. It was a case of double aortic and mitral regurgitant lesion with great enlargement of the heart. The cardiac dullness and impulse could readily be made out in the posterior portion of the left half of the chest, and it was possible to count the heart beats with ease. He believes that the condition is not as rare as the impression of its rarity would warrant. That is because it is not mentioned in the text-books.

The resignation of Col. Woodhull, given because of his removal to Manila, was read and accepted. He was nominated for honorary membership.

The society then adjourned.

BIRTHS AND DEATHS IN DENVER.

There were 260 births in Denver during the month of February. Nearly all the physicians made reports to the health departments, which is the first time that anything like an accurate record on this subject has ever been obtained. February being a short month, and a few sources of information being yet to hear from, it is estimated that the average number of births is about 300, in which case the natural increase of the population of the city annually would be 3,600, or 30,000 to 50,000 within the next ten years, allowing for the usual mortality.

The February deaths numbered 168 from all causes. Fifty were caused by consumption and twenty-five from pneumonia, two from scarlet fever, one from diphtheria and one from typhoid fever. The death rate for the month was .79 lower per 1,000 population than during the same month one year ago.

FROM OUR EXCHANGES.

**Tenotomy
of the
Tensor Tympani.**

In the Laryngoscope, Dr. W. L. Ballenger, of Chicago, gives the following indications for a tenotomy of the tensor tympani muscle for relief in deafness and tinnitus:

Operate when (a) there is retraction of drumhead, due alone to shortening of the tendon of the tensor tympani. This is rare; (b) if the focusing or selective power of the ear is intact, and there is retraction of drumhead; (c) politzeration, followed by relief of short duration, is sometimes a favorable indication.

**Tuberculosis
of the
Larynx.**

Dr. S. G. Dabney contributes to the American Practitioner and News a worthy article on tuberculosis of the larynx, in which he states: "The bacilli of tuberculosis are very frequently absent from the sputa in the laryngeal form of the disease. Sometimes they may be obtained on a little absorbent cotton carried into the larynx and pressed on the affected area. 'In laryngeal tuberculosis,' says Kyle, 'the sputum rarely ever shows the bacilli, as they are located in the tissue.' Browne is perhaps more accurate in saying that the presence of the bacilli 'is hardly to be expected, unless the lesions have advanced so far as to produce actual breath of surface.' The treatment should be palliative, hygienic and aseptic. When the ulcer is accessible it is to be thoroughly curetted and then a solution of lactic acid, beginning with 20 to 40

per cent. in strength and increasing to the pure acid, is rubbed well into the ulcer. I have used this treatment with benefit."

**Recovered
Consumptives.**

The New York Medical Journal of February 10, 1900, contains an article by Dr. Paul Paquin of Asheville, N. C., on "Recovered Consumptives Who Remain Well." Dr. Paquin cites some twenty-odd cases which have come under his personal observation since 1894. He prefaces his paper with an apology for its title. "The title of this paper is warranted for two reasons, namely: Some of the profession have, in a measure, the unfortunate habit of scoffing at those who claim to have succeeded in arresting tuberculosis (saying the improvement is only ephemeral) and the laity is so much influenced by this pessimism that usually its members fall into the rut of fatalism when some one among them is a pronounced consumptive." It is not necessary to quote the article at length. Dr. Paquin strongly recommends the use of serum from immunized animals. "Some results are splendid, others encouraging, others mediocre, others nil; still, two facts of serious import were established, viz., serotherapy from the very start not only did good to tuberculous sufferers, but succeeded in arresting consumption. Second, antitubercle serum was inaugurated in America as a generally useful remedial and just measure in the therapeutics of tuberculosis."

Value
of
Cremation.

The Journal of the American Medical Association prints a full and concise article on the value of cremation, written by Dr. R. M. Stone, M. A. Dr. Stone reviews in detail the various methods in use for the disposal of the dead, contrasting the disadvantages and dangers of burial with the benefits of cremation.

"Pasteur showed that earth-worms had carried to the surface, twelve years after death of an animal from splenic fever, the germs of the fever, which brought about a new outbreak of the disease. Professor Seimi, the great Italian, proved that the common constituents of the body, brain, blood and fibrin are converted, by decomposition, into most virulent ptomains. Freire of Rio Janeiro proved that the soil of the cemeteries in which yellow fever victims had been interred teemed with micro-organisms identical with those found in the vomit and blood of yellow fever victims. These and other scientific observers have established, without any question, the proposition that earth-burial not only pollutes earth, air and water, causing diseases of various forms, and even the very specific infections and contagious diseases from which the dead met their death."

A few instances of English cases will show the matter in its most horrible light. Dr. Quirke reported, in 1889, that he found the grave-diggers at work digging through the remains of persons formerly interred there. The coffin and putrid remains soon sank into the water as they got deeper and they baled the water out, throwing it over the graves near by. During the disgusting process a pestilential stench

was wafted through the graveyard, infecting the air. Lord Bessborough, to whom the doctor was reporting, said he saw in the same cemetery a coffin held down with a spade during burial to keep it from floating. He naively suggested that some sort of a filtering tank should be used to filter the water that oozed from the graveyard before the people used it for drinking purposes. Minchinhampton was decimated by a disease caused by the use of a fertilizer used on the gardens of the town, which was the rich soil of an abandoned graveyard. The epidemic of cholera in London, in 1854, was thought to be due to the upturning of the soil where cholera victims of 1665 were buried, and there is no longer room for discussion as to the great danger from the use of water of wells infected by drainage from a cemetery near by.

The death rate of London in 1872 was nearly 77,000. This gave not less than a million of festering bodies in all stages of dissolution in and around the city at that time. These figures are appalling to us who live in a less closely packed district.

The religious objection was at first very pronounced. Many of the clergy called cremation irreligious, heathenish and pagan. Such objections are no longer heard. On the contrary, most eminent religious men are now the strongest advocates of the practice. The Bishop of Lincoln has said: "Only weak-minded brethren might have their belief shaken in the doctrine of the resurrection." Canon Lidden said: "The resurrection of a body from its ashes is not a greater miracle than the resurrection of an unburnt body." Lord Shaftesbury said: "What an audacious limitation of the power of the

Almighty! What has become of the blessed martyrs who were burned at the stake?" Father Buccelatti, the professor of theology, wrote to Professor Polli: "You ask me in what relation cremation stands to religion. As a reasoning Catholic, free from prejudice, I openly declare that cremation is not inconsistent with the teachings of religion." Right Rev. Phillips Brooks said: "I believe there are no true objections to cremation." Rev. Heber Newton said: "The religious objection has always seemed nonsensical. Nothing but the stupid, blind prejudice of a blind orthodoxy could allow any notion of a religious objection to have weight."

Slight objection has been made that the parting with our loved ones, knowing that the next moment will see them consigned to the furnace, will prove a greater source of anguish than to see them lowered into the open grave and to hear the earth fall on the coffin. Earth has no greater anguish than the last sight of the dearest face on earth to us, but if there can be any difference, it seems to me that the placing of a loved one in a cold, damp, lonesome grave to rot would be far the greater.

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**Tuberculosis
of the
Conjunctiva.**

Dr. T. L. Henderson (the American Journal of Ophthalmology, Vol. XVI., No. 10) reports a case of tubercular ulcer of the conjunctiva which is of interest, because an early microscopical examination of the ulcer might have revealed the existing constitutional condition before the physical signs pointed to it and possibly before the disease had reached the incurable stage. The patient, a woman

56 years of age, had been under treatment for about six months for an obstinate ulcer upon the palpebral conjunctiva, but had shown no constitutional symptoms other than a slight daily rise of temperature, supposed to be malarial. Dr. Henderson curetted the ulcer with the result of healing it in about a week. The woman, however, died of pulmonary tuberculosis five months after the operation on the lid. The microscope proved the ulcer to contain giant cells, tubercles and tubercle bacilli. Bacilli were also found in the patient's sputum.

♦ ♦

**Milch Cows
and
Tuberculosis.**

A considerable percentage of our milch cows are tubercular. To what extent the use of tuberculous milk is accountable for tubercular diseases of children I am unable to state. That it is an important case no one will deny. To prevent the sale of tuberculous milk we must stop the use of tuberculous cows for the production of milk. This has been attempted in some cities and states, but with only partial success. With the tuberculin test it is possible to detect the presence of tuberculosis in a cow in probably 96 to 97 per cent. of all cases, but the test does not show to what extent the animal is diseased. No animal with incipient tuberculosis should be used for the production of milk. The state, under its police powers, has the right to provide for the inspection of all milch cows, and to prohibit the use of those shown to have tuberculosis. It may condemn and slaughter such animals for the protection of the public health.

A city may require the dairymen to furnish satisfactory evidence that all

cows producing milk which he sells in such city are free from tuberculosis or other dangerous communicable disease. In the case of the city of Minneapolis, the Supreme Court of Minnesota decided that the municipality could require that all cows furnishing milk for that city should be shown to be free from tuberculosis by the tuberculin test, and that this is a reasonable method for detecting this disease. We can never hope to stamp out tuberculosis among milch cows in this manner. We may lessen the number

of cases, but so long as the conditions which produce bovine tuberculosis remain, we will never eradicate the disease from our herds. Cows under natural conditions, in the open, rarely have tuberculosis. It is the dark, filthy, unventilated cowstable that is principally responsible for the spread of tuberculosis among dairy cattle.—C. O. Probst, M. D., secretary of the Ohio State Board of Health, in Medicine, in the Cleveland Medical Gazette.

Colorado, unfortunately, bears witness to the same conditions.

NEWS ITEMS.

THE PLAGUE.

The plague has made its appearance in the United States. Early in February the Japanese tramp ship Nanyo Maru arrived at Port Townsend with a case of suspicious disease on board, two men having died during the voyage. The ship was ordered into quarantine at Diamond Head and has remained there since, during which time seventeen cases have developed and one man has died. At first the diagnosis was held in abeyance, but was given later as beri-beri. On March 8 it was officially acknowledged that the disease was bubonic plague.

In San Francisco a suspicious case was found in the Chinese quarters March 7, and the entire Chinatown placed under strict quarantine.

In Astoria, Ore., the health officers are ordering a slaughter of rats as a prophylactic measure.

Honolulu, Hawaii, February 9.—Via San Francisco, February 15.—Five cases of plague have developed since

the Alameda sailed, February 2. Among the stricken ones are two white men—J. Weir Robertson, a clerk in a large hardware store, and J. H. Hartman, a stableman, who recently came from San Francisco. Robertson lingered twenty-four hours and then succumbed; Hartman is said to be improving under the Pasteur treatment. Hartman was employed in a stable, next to the Pantheon saloon, a place from which three cases were taken. The saloon and adjoining buildings were destroyed by fire on the 7th instant.

No new cases have developed during the past four days. The house to house inspection is being kept up. The health officials are feeling easier and have granted permission for churches, schools and places of amusement to reopen. A bounty of 25 cents for live rats and 15 cents for dead ones has been offered. The board of health will also set a day apart for the wholesale slaughter of rats; every householder will be supplied with a package of poi-

son for use on their respective premises. It is expected that this latter plan will prove to be an effective one.

Honolulu, February 15, via San Francisco, February 22.—The black plague has broken out at both Kahului, on the island of Maui and Hilo, on the island of Hawaii. The latest advices report seven deaths at Kahului, all Chinese, and one at Hilo, a Portuguese woman, the wife of A. G. Senao. The news was received here February 10, in a letter from Sheriff Baldwin. Chinatown, in Kahului, which had about 300 inhabitants, has been destroyed by fire. The sanitary conditions were worse than in Honolulu. The towns of Lahaine and Hauhua have established quarantine against other portions of Maui. An unfortunate feature of the case is the proximity to Kahului of several large plantations with their thousands of laborers. It is thought that the plague reached Kahului through the shipment of Chinese New Year goods.

In Honolulu the health situation is better than at any time since the outbreak of the plague. Not a case has developed in the last ten days. Although the board of health is confident that the trouble is over, vigilance will not be relaxed. Up to February 6, the date of the last case, there have been fifty deaths from plague in this city. The board of health has passed a resolution prohibiting the landing of all merchandise from countries where the bubonic plague exists.

The first vessel to have her freight refused landing under this order was the British Stratlyle of the San Diego line.

The penniless condition of the thousands of Chinese and Japanese who lost their homes in the recent fire in

Chinatown is growing to be a matter of concern to officials. The council of state appointed an additional \$10,000 for the completion of camps for them.

San Francisco, February 27.—The steamer Australia arrived from Honolulu to-day. The Associated Press correspondent at Honolulu, writing under date of February 20, says:

After twelve days passing without a sign of the plague, three cases were discovered yesterday and all ended fatally. The victims were two Chinese males and a woman—half Chinese and half Hawaiian.

At a meeting of the board of health yesterday President Wood reported that the funds at their command were exceedingly low and that more money for carrying on the work of fighting the plague was immediately necessary. On February 15, out of \$142,600 that had been appropriated for the use of the board of health, up to that time \$138,000 was offset in bills. Consequently but \$4,600 remained available.

On this statement it was decided to ask the council of state for a further appropriation of \$100,000.—Rocky Mountain News.

In Sydney, N. S. W., a large number of suspected cases of the plague have been quarantined.

Noumea, New Caledonia, February 27.—Two more white persons and eight Kanakas have died of bubonic plague.

In Calcutta, during the week ending March 3, 411 deaths occurred from the plague.

In Buenos Ayres a number of suspicious cases have been officially reported.

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A deaconess' home has been started in Pueblo, this being made feasible through the generosity of Miss Finley.

THE ARAPAHOE COUNTY HOSPITAL TRAINING SCHOOL FOR NURSES.

The graduating exercises occurred February 22. The exercises were held in the "sun room" and adjoining rooms which were filled with the friends of the novitiates, among them being all the nurses of St. Luke's Hospital who could be spared. The rooms were prettily decorated with flowers and colored lights from a hundred Chinese lanterns.

Frank L. Bishop, chairman of the hospital committee of the board of county commissioners, presided and introduced the graduates to Chairman Watts of the board, who distributed the diplomas. The Rev. J. A. Schofield made the prayer commending to Almighty God the labors of the nurses. After the exercises there was a collation, followed by dancing. Those graduated were:

Miss Georgie Kepkey, Miss Jessey Meuser, Mrs. Esther Ireland, Miss Louise Perrin, Miss Ethel King, Miss Belle Leslie, Miss Ellen Stephens, Miss Frances Leonard, Miss Mayme Dodge, Miss Jeanette Orr, Miss Helen Thompson, Miss Luella Fowler, Miss Florence McCartney.

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OLEOMARGARINE.

The following, taken from the Rocky Mountain News of February 28, is given for what it is worth:

The war on oleomargarine has taken root in Kansas City and Chicago, packing centers, where the surplus fat from the entrails of cattle are stripped for the fat used in making the bogus butter. T. L. Monson, dairy commissioner, has received from Chicago a statement from Professor Fagersten, a

reputable analytic chemist of that city, which he will introduce at coming trials in Colorado of men guilty of handling oleo. Professor Fagersten says:

"All bogus butter is unwholesome if not absolutely poisonous. If you are an oleomargarine eater, your doctor must not prescribe calomel for you; bogus butter converts calomel into corrosive sublimate, a deadly poison, causing Bright's disease, diabetes and stomach and bowel troubles."

"Many people use oleo and do not know it," said Mr. Monson. "The counterfeit in some cases is so perfect that only experts can detect the difference without an analysis. As originally made, only clean and wholesome materials were used in its manufacture, but greed for gain has led manufacturers to use not only unclean fats and other substances, but such as are positively poisonous and loaded with disease-breeding germs. It is an uncooked fat and as such is unwholesome as food and extremely dangerous to persons in ill health and with weak digestions, while pure butter is assimilated by the weakest stomach. It has been proven by exhaustive tests by hospitals and asylums of Europe and America, that its use invariably raised the death rate among patients, in some instances as much as 30 per cent.

"Oleomargarine being uncooked in manufacture, and the substances from which it is composed being impregnated with many contagious germs, these germs exist in goods on sale in virulent condition.

"Another thing the packers and stockmen must refute. They assert that if the fat of the entrails (they do not make it known that the fat is taken from entrails, which often burst

in stripping) can be used for oleomargarine, the cattle demand \$3 to \$4 per head more than if it goes for tallow. In the first place, this is untrue, but since the manufacture of oleomargarine was started on an extensive scale in this country tallow has naturally gone skyward and soap is a large per cent. higher than formerly."

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VACCINATION.

The following letter has been received by one of the teachers in the public schools and by her referred to the Health Commissioner:

Denver, Colorado,

February, 11, 1900.

Miss. ———, City.

Dear, Madam, I do not want my daughter, Marguerite Marshall, Vaccinated, as I am strongly opposed to that mode of Medical Practice, under the blind of being a preventative of smallpox. As far as vaccine being a preventitive, is purly & simply a medical fake, & delusion, if any of the M. D's. advocating it does pretend to believe in its preventative powers. I am in the medical business, & have been for the past ten years, & speak from my experience, that when the virus is once injected, in the person, they are never as healthy as before the operation of poisoning. And that many of the Patients, of to day, can trace their disease, to the poisoning vaccine, of times gon by. The best & foremost Physicians of to day, decry the practice, & oppose it. And well they may. It is fast becoming un-professional, for a practical physician, to reccomend, letalone practice, this behind the date, ellusion. Please excuse, any further remarks on this subject, and do not insist upon Marguerite being, POISONED, by vaccination.

In respect to you, & the position, you are in as a teacher in a public school, holding office, under other Officers. I do not direct this letter to you, but to those who ADVOCATE, & try to force upon the people, this illusive practice, vaccination,

Yours in respect.

The letter might properly be referred to the State Board of Medical Examiners, with recommendation to look into the signer's qualifications as a practitioner.

The Denver Health Commissioner has received from the Indiana Supreme Court a copy of a decision, according to which parents can be compelled to obey the requirements of school authorities as regards vaccination and other sanitary measures. He has compared the laws of Terre Haute, Ind., where the test case was made, with those of Denver, and reached the conclusion that Denver parents who refuse to comply with the rules set forth a few days ago in a little circular for school teachers, will be compelled to do the bidding of the health officers or keep their children from public schools. The Terre Haute man refused to have his children vaccinated and obtained an injunction in the lower courts restraining the authorities from excluding his children from the schools. The Supreme Court decided that the vaccination order was an important measure and upheld the school board.

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The Western Ophthalmologic and Oto-Laryngologic Association will hold its next annual meeting in St. Louis, April 5-7. A most interesting scientific and entertainment program has been prepared.

MEDICAL AND SURGICAL STAFF OF ST. LUKE'S HOSPITAL.

Physicians:

Dr. Henry Sewall.
Dr. S. G. Bonney.
Dr. H. B. Whitney.
Dr. H. W. McLauthlin.

Surgeons:

Dr. E. J. A. Rogers.
Dr. Clayton Parkhill.
Dr. O. J. Pfeiffer.
Dr. C. A. Powers.

Neurologists:

Dr. H. T. Pershing.
Dr. J. T. Eskridge.

Gynaecologists:

Dr. W. S. Bagot.
Dr. W. B. Craig.

Ophthalmologists:

Dr. E. C. Rivers.
Dr. J. M. Foster.

Rhinologist and Laryngologist:

Dr. Robert Levy.

Obstetricians:

Dr. A. K. Worthington.
Dr. F. H. McNaught.

Bacteriologist:

Dr. W. C. Mitchell.

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THE TUBERCULOSIS CONGRESS.

A tuberculosis congress has been held in New York City under the auspices of the Medico-Legal Society, opening February 22. A permanent organization was effected by the selection of the following officers: Honorary president, H. M. Ball of Brooklyn; president, Charles Denison of Denver, Colo.; vice presidents, Dr. Henry B. Baker, secretary of the State Board of Health, Michigan, Chief Surgeon C. K. Cole of Helena, Mont., Colonel C. E. Chancellor of St. Louis, T. D. Crothers of Hartford, Conn., Judson Daland of Philadel-

phia, F. A. Luesem of Chicago, Dwight S. Moore of Jamestown, N. D., A. E. Osborn of Glen Ellen, Cal., J. C. Wilson of Philadelphia, O. B. Wingate of Milwaukee, Thomas Bassett Keyes of Chicago, W. S. Gottheil of New York, Robert Barthalow of Philadelphia and J. Mott Dwyer of New York.

Dr. Denison, who, although not present, was complimented by election to the presidency, declined to accept the office, believing that he was too far away to give it the attention necessary to the success of the organization.

It was announced at the meeting that more than 200 physicians had enrolled and qualified as members of the congress.

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Smallpox has prevailed in Kansas, according to the communication of Secretary W. B. Swan of the Board of Health of that state, sent to the Colorado state board. In the letter the secretary says that there have been 437 cases in the state this year and ten deaths have resulted. Most of the cases are mild—so mild that it is often difficult for physicians to convince their patients that it is really smallpox.

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FOR SALE.

A second-hand Roberts & Allison surgical chair, in good order. Address The Colorado Medical Journal Co., Physicians' building, Denver, Colo.

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FOR SALE.

Two contracts for Tour A with the European Tourist Company of New York; 38 days from New York and return; 14 days in Paris; 7 days in London. Total cost of trip, everything included, \$255. For full particulars address Dr. Melville Black, Denison Bldg., Denver.

RECENT LICENTIATES OF
COLORADO.

John A. Murray, Medical Department University of Pennsylvania.

Henry B. Stehman, Jefferson Medical College.

Hubert G. Wilbur, Medical Department Harvard University.

C. F. Wilkin, Columbus Medical College, Ohio.

J. C. Bynum, College Physicians and Surgeons, St. Joseph, Mo.

Herbert R. Hicks by examination.

Chalmer M. C. Prentiss, Medical Department University of Wooster, Cleveland, Ohio.

Charles H. Bushong, College of Physicians and Surgeons, New York City.

Kive Le Clare Clock, Barnes Medical College, St. Louis, Mo.

Sarah A. Felt, Hering Medical College, Chicago, Ill.

Allen B. Stewart, Medical Department University of Minnesota.

Frances Margaret Lane, Hering Medical College, St. Louis, Mo.

C. R. L. Halley, Bellevue Hospital Medical College.

James D. Eggleston, Georgetown University.

John A. Wilder, Albany Medical College.

Duncan McNab, Jr., Albany Medical College.

R. C. Adkinson, Rush Medical College, Chicago.

J. F. Alexander, Missouri Medical College, St. Louis.

J. E. Warrick, College Physicians and Surgeons, Baltimore, Md.

Fred H. Welles, Syracuse Medical College, N. Y.

Robert Burton, College Physicians and Surgeons, Chicago, Ill.

Delos West Hoskins, New York Homeopathic College.

Charles Holden, ten years' practice.
Robert Lee Tye, Bellevue Hospital Medical School.

William A. Kerr, Medical Department Trinity University, Toronto.

F. B. West, Barnes Medical College, St. Louis, Mo.

F. M. D. Hill, Medical Department Tulane University, Ohio.

Lewis E. Fitzgerald, Harvard Medical College.

J. A. Creighton, Ohio Medical College, Cincinnati.

H. D. Steele, Medical Department Northwestern University.

Gustav J. Racek, Medical Department Northwestern University.

Charles E. Lander, Medical Department of University of Maryland.

M. L. Hooper, College of Physicians and Surgeons, Chicago, Ill.

C. T. Stough, Chicago Homeopathic College.

J. B. Kenney, Marion-Simes Medical College, St. Louis.

J. B. Gerino, University of Torino, Torino, Italy.

A. J. Brooks, Cleveland Medical College.

Will H. Swan, Medical Department Harvard.

C. A. Rucker, Barnes Medical College, St. Louis.

Morris Carter, American Medical College, St. Louis.

W. H. Rhienfrank, Medical Department University of Michigan.

B. T. Cantwell, University of Kansas City, Mo.

Bernard Kowenstrot, University of Louisville, Ky.

S. Morgan, ten years' practice.

Erastus A. Tuttle, ten years' practice.

Annie P. Holt, Tuft's Medical College, Boston.

John A. Lambert, Central College Physicians and Surgeons, Indianapolis.

R. M. Campbell, Medical Department University of Denver.

B. F. Talsos, Jefferson Medical College, Philadelphia.

Marshal Pettitt, Medical College of Indiana.

Solomon Orentreich, ten years' practice.

A. C. H. Fried, Royal University of Erlangen, Germany.

C. H. Ross, Medical Department University of Omaha, Neb.

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COUNTY HOSPITAL STAFF.

The following were appointed members of the advisory board by the county commissioners, February 16: Mrs. Seraphine Pisko, O. S. Storrs, Dr. P. V. Carlin, Dr. Charles S. Elder and Dr. David A. Strickler. They take the place of Mrs. Sarah Platt-Decker, C. S. Morey, Dr. Kinley, Dr. Grant and Dr. LeMond. They have recommended to the Board of County Commissioners the following staff for the County Hospital, to go into effect April 1:

Medicine—A. R. Seebass, G. E. Tyler, W. J. Rothwell, J. N. Hall, Henry Sewall, H. B. Whitney; homeopaths, E. J. Clark and G. E. Brown.

Surgery—W. B. Craig, Clayton Parkhill, C. B. Lyman, Leonard Freeman; homeopath, J. W. Harris.

Obstetrics—T. E. Taylor, Laura L. Liebhardt, Bertha Connolly; homeopath, E. G. Freyermuth.

Gynecology—C. K. Fleming, C. S. Elder, W. A. Jayne, I. B. Perkins; homeopath, Curtis W. Beebe.

Eye and Ear—Edward Jackson, D. H. Coover, W. C. Bane; homeopath, S. S. Kehr.

Genito Urinary—H. E. Warren, S. D. Van Meter; homeopath, J. W. Harris.

Nervous Diseases—S. D. Hopkins, Edward Delehanty; consultants, J. T. Eskridge and H. T. Pershing.

Nose and Throat—Robert Levy, F. E. Waxham; homeopath, S. S. Kehr.

Pathologist—J. A. Wilder.

Orthopaedic Surgery—G. B. Packard.

Dermatology—J. M. Blaine.

Dentist—O. W. Brown.

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STATE BOARD OF HEALTH ITEMS.

During last August the question of a modification of the postal regulations, regarding the transmission of bacteriological specimens, was taken up by the Colorado State Board of Health. The regulations then in force required the use of a very clumsy receptacle. Such receptacle required a swab so short as to make it almost impossible to get satisfactory specimens for examination, and was so large as to require 12 cents postage, the entire outfit being treated as fourth class matter. The modification of the postal order was prepared by the Colorado State Board of Health and the aid of other state boards was enlisted in securing the desired change. A paper prepared by the secretary of the Colorado State Board of Health was read at the meeting of the American Public Health Association, and the entire matter was referred to a committee composed of representatives from Canada, Mexico and the United States. On March 3 a new order was issued by the postoffice department, in accordance with the request made last August, so that the new order now reads

exactly in accordance with the draft prepared by the Colorado State Board of Health.

The new regulations have the following advantages:

1. They allow the use of a test tube instead of the former clumsy vial; this permits the use of a swab of sufficient length to reach the back part of the throat with ease.

2. The weight of the outfit is much reduced, so that the postage will be far less than formerly.

3. The postmaster-general has directed that these specimens be treated as first class letter mail, so that hereafter they will be delivered immediately upon receipt.

It is hoped that with the new regulations a much larger use of the Bacteriological Laboratory may be made than formerly.

It is the intention of the State Board of Health to purchase new outfits, and to establish supply depots in each county as soon as the outfits can be secured.

The effort of the State Board of Health to secure correction of the health administration in New Mexico has been most gratifying. It has received the following letter from the surgeon general of the Marine Hospital service:

"Sir—Referring to your letter of the 30th ult., with regard to the introduction of the infection of smallpox into Colorado from New Mexico, I have to inform you that the bureau has ordered an investigation of the introduction of smallpox into Colorado from New Mexico and Arizona, more particularly at Folsom and Catskill; and that appropriate action will be taken when this investigation has furnished the basis for such action. Respectfully,

"WALTER WYMAN."

Accordingly Past Assistant Surgeon J. O. Cobb has been directed to investigate the conditions causing infection of Colorado from New Mexico. Dr. Cobb is now at work upon this problem. It seems fair to predict that this investigation by the Marine Hospital service will cause a permanent amelioration of the conditions which have so long proved a trial to Colorado health officials.

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WATER AND FOOD INSPECTION.

A water inspector and a food inspector are the two latest additions to the staff of the State Board of Health.

Frank Young was appointed to the former position, but the other has not yet been filled.

Mr. Young's duties will be to prevent the contamination and pollution of the waters of streams, reservoirs and basins that are used for domestic purposes. He will start in at once and make an investigation of the condition of Denver water supply and make a report to the board of his conclusions. Under the laws of the state the board has the right to prosecute any corporation or municipality furnishing impure hydrant water. The Denver Union Water Company may, therefore, be under the ban in the event that impurities are found in the city water.

The food inspector's duties are to inspect meats, dairy products and all foods which are liable to contain impurities.

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TUBERCULOUS CATTLE.

In view of the increasing opinion of the role bovine tuberculosis plays as an agency for the increase of human tuberculosis, the proclamation of Governor Stanley of Kansas, declaring a quarantine which practically excludes

the shipment of all dairy cattle into Kansas, is of more than passing interest. The quarantine was established in order to prevent the further introduction of tuberculosis into Kansas herds. New England states, New York, New Jersey, Delaware, Pennsylvania, Kentucky, Ohio, Indiana, Michigan, Tennessee, Illinois, Wisconsin, Minnesota, Nebraska, Iowa and Colorado are specifically mentioned in the proclamation.

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The Journal reprints the following letter for the benefit of its readers:

SURGEONS WANTED IN THE PHILIPPINES.

War Department,
Surgeon General's Office,
Washington, February 6, 1900.

To the Editor of the Medical Journal:

Sir—The medical department of the army is now in need of some additional assistance in the Philippines and it is desired that candidates for appointment as acting assistant surgeons make application to the surgeon general of the army. Applicants must be graduates of reputable medical colleges, who have had practical experience, since graduation, in hospitals or private practice: Candidates between the ages of 25 and 35 are preferred. Candidates should forward with their applications one or more letters from well-known professional men, giving testimony as to their character and qualifications. Appointments will not be made through political influence and letters designed to produce political effect will injure rather than benefit the applicant. All applicants will be examined as to their physical and professional qualifications for service in the Philippines before they are

given a contract. Contracts are made for one year, with the understanding that the approved candidate will remain in service for a longer period if his services are required. You will confer a favor upon the medical department by publishing this notice.

GEORGE M. STERNBERG,
Surgeon General, United States Army.

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A FINE NEW RESORT.

The hot springs at Idaho Springs have been sold to a Milwaukee syndicate known as the Gibson Hotel and Hot Springs Company. Work will be commenced as soon as possible on the construction of a new hotel, which will be a beautiful modern structure. How much money will be expended in beautifying the resort will not be decided upon until the company holds a meeting in Milwaukee. Construction will be vigorously pushed, however, and the resort will be ready by the time the summer tourists begin to arrive.

The syndicate acquired the property upon the payment of \$60,000. Efforts have been made repeatedly during the past ten years to buy the springs and while many of them were almost consummated, something always seemed to occur at the last minute which prevented the purchase, until now.

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RECURRENT BLOOD STAINS.

Denver has had a slight bloody mystery excitement. The residents of a certain house observed certain red stains on the door casing and wall paper, which they took for blood stains. In spite of vigorous scrubbing the good housewife could not eradicate the stains. They would disappear only to return again after a short time. The use of bread and vitriol was followed by the same result. All kinds of ru-

mors and fears were making life miserable for the tenants until the explanation of chromogenic bacteria dispelled all cause for alarm.

As a result of failure to observe the ordinance requiring physicians to notify the Health Commissioner as to the births they have officiated at (or have not officiated at—to use a solecism), a number of the Denver physicians have been fined in the police court. It is to be presumed that they will be a little more prompt as to their avowals and disavowals in the future. The Health Department claims that the women physicians are more obstinate in their non-observance of the ordinance than are their confreres.

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REGISTERED PHARMACISTS.

The following-named passed the State Board of Pharmacy examinations, held March 9 and 10, as registered pharmacists: H. R. Baumgarth,

Eldora; Charles R. Bauman, Aspen; F. C. G. Braudsch, city; William C. Clemons, city; William C. Dixon, city; H. M. Fletcher, Cripple Creek; A. A. Fouken, city; George E. Jones, city; Frank H. Martell, Colorado Springs; W. H. Peabody, Cañon City; W. N. Wycoff, Walsenburg.

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SCHENCK.

Prof. Leopold Schenck, of Vienna, has retired from the faculty of the Vienna University, on request, as his pamphlets have angered his colleagues of that school, who accuse him of self-advertising. Current news has it that Prof. Schenck contemplates the pursuit of practice in America.

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In San Francisco the death has been reported of Miss Elida Wilbur, who is said to have been in a trance for the previous two years, the result of poisoning with illuminating gas.

BOOK REVIEWS.

DISEASES OF CHILDREN. A Manual for Students and Practitioners. By George M. Tuttle, M. D. Illustrated with five plates in colors and monochrome. Lea's Series of Pocket Text-Books. Series edited by Bern. B. Gallaudet, M. D. Lea Brothers & Co., Philadelphia and New York, publishers. Price, \$1.50 net.

Personal acquaintance with the author adds to the pleasure with which a favorable criticism of the work is given. Like the other members of this series, this work attempts to give a clear and concise presentation of our

present knowledge of the subject of pediatrics, rather than to form any original contribution to the science. In this it certainly excels. Beginning with the birth of the infant, its normal development, the methods to be followed in examination, the diseases of the new-born infant, and infant feeding are reviewed. The latter chapter is one of the best in the work. The analysis of human and cow's milk and the laboratory methods of preparing the latter are concisely discussed. The sang froid with which he dismisses from consideration as being worthless all the proprietary infants' foods, except malted milk and Mellin's food, is

refreshing, to say the least. Then follows the consideration of the various diseases of children, *seriatim*. The book is a useful addition to the physician's working library.

A COMPEND OF THE PRACTICE OF MEDICINE. By Dan'l E. Hughes, M. D. Sixth physician's edition. Thoroughly revised and enlarged, including a section on Mental Diseases and a very complete section on Skin Diseases. P. Blakiston's Son & Co., Philadelphia, Pa.

The critic confesses to a general prejudice against compends. This gives way, however, before the present work. An excellent and clearly written abstract of the practice of medicine, it is an exceedingly convenient work for hasty consultation. Not pretending to take the place of text books on the same subject, it excellently fills the field mapped out for itself. It can be well recommended to students and practitioners alike.

DISEASES OF THE EYE. A Manual of Diseases of the Eye. By Edward Jackson, A. M., M. D., late Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine. 12mo volume of over 500 pages, with about 175 beautiful illustrations from drawings by the author.

The author states that his book is intended to meet the needs of the general practitioner of medicine and the beginner in ophthalmology. Dr. Jackson has been a teacher for so long in this field that he has acquired the faculty of imparting knowledge in its simplest form. The arrangement of his book is admirable, and it is well indexed. Every structure of the eye is

dealt with under a separate chapter. Each chapter is divided into many parts, so that every phase of the subject may be more clearly defined, better indexed, and easily referred to.

The book is entirely free from verbosity. It is short and direct. The author has no hobbies to ride—at least he does not ride them in public. It is a clean, concise presentation of the author's views, as a result of his experience. It deals with every department of ophthalmology. It is well illustrated. Most of the illustrations are from the author's own drawings. This book deserves a hearty welcome, and we bespeak such for it.

MELVILLE BLACK.

A POCKET MEDICAL DICTIONARY, giving the Pronunciation and Definition of the Principal Words used in Medicine and the Collateral Sciences; 30,000 medical words. By George M. Gould, A. M., M. D. Fourth edition, revised and enlarged. P. Blakiston's Son & Co., publishers, Philadelphia, Pa. Price, \$1.00.

This handy little work will be like part of the boy's definition of a lie, "an ever-ready help in trouble" of certain kinds to the physician or student who possesses it. It is sufficiently extensive to be of great service and yet sufficiently small to be very convenient. The tables, of which there are fourteen, are splendid examples of comprehensive, concise and desirable information. The table of Clinical Eponymic Terms deserves special commendation. The workmanship in the book is in keeping with the work itself. With flexible morocco covers and bound to open flat, it is a model for others to follow.

THE COLORADO MEDICAL JOURNAL

AND WESTERN MEDICAL AND SURGICAL GAZETTE.

A Scientific Medical Journal, Published in the Interest of the Profession of Colorado and Adjoining States. A Truly Local Journal.

A Journal of Science, of News and of Medical Lore.

VOL. VI.

DENVER, COLORADO, APRIL, 1900.

No. 4.

ORIGINAL COMMUNICATIONS.

The Pulmonary Complications of Typhoid Fever.*

By CARROLL E. EDSON, M. D., DENVER, COLO.

Before considering in detail the various thoracic disorders which may be associated with typhoid fever, we must remember that enteric fever can no longer be looked upon as a disease of the small intestine alone, but that it is a general infection, in which nearly every organ of the body may be affected by the toxins of the bacilli growing in the intestinal canal, and in which, now and then, some part other than the bowel may bear the brunt of the attack. Not only may the damage be done by the diffusible toxins, but the bacillus of Eberth itself may cause lesions in parts distant from the bowel. The role of the typhoid bacilli in causing gall-stones and cholecystitis is every year receiving fresh confirmation.

This extra-intestinal growth of the bacillus is not only secondary to an ordinary intestinal typhoid, but may be apparently primary, and there are already several cases recorded which presented all the clinical picture of typhoid fever in temperature, rose spots and Widal reaction, and yet showed,

post-mortem, no intestinal lesion whatever, but an isolated and apparently primary invasion of some other portion of the body by the bacillus of Eberth.

A. Fränkel¹ reports the case of a girl of 21 who died after a typical typhoid fever with rose spots, enlarged spleen and consolidation in the lungs. At autopsy no intestinal lesion whatever was found, but in the affected portions of the lungs a typhoid invasion.

The more carefully our post-mortem examinations are made in cases of typhoid fever which showed, perhaps, no obvious complications during life, the more frequently we find lesions in the thoracic organs, which must be looked upon as a real part of the pathology of the disease.

In explanation of some of the less frequent phases of typhoid fever, allow me to read you a few of the conclusions from an extended and most interesting paper by Mallory² on "The Histological Study of Typhoid Fever." He says:

¹ Deutsche Med. Wochenschrift, April, 1899.

² The Journal of Experimental Medicine, November 1898.

*Read by invitation before the Pueblo County Medical Society, February 20, 1900.

"The typhoid bacillus produces a mild, diffusible toxine, partly within the intestinal tract, and partly within the blood and organs of the body.

"This toxine produces a proliferation of the endothelial cells, which acquire for a certain time malignant properties, the newly formed cells being characterized by marked phagocytic properties. While these cells are produced most abundantly along the lines of absorption from the intestinal tract, they are produced also by distribution of the toxines through the general circulation, and the most where the circulation is slowest, and all over the body in lymphatic spaces and vessels by absorption of toxines eliminated from the blood vessels.

"The swelling of the intestinal lymphoid tissue, the mesenteric nodes and spleen, are due almost entirely to the formation of phagocyte cells. The necrosis is accidental. Many phagocyte cells pass through the liver and lungs and get into the general circulation. A few come from the abdominal lymphatics through the thoracic duct. Various sequelae deserve more careful bacteriological and histological study, as shown by one case of pneumonia due to pneumococci, but complicated by the presence of typhoid bacilli, in which great numbers of phagocyte cells were found in the exudate."

With this digression—in which the pathologist has shown some reasons for what every alert clinician has long known, that the care of a patient with typhoid fever must include the whole man, and not simply his belly—let us consider the thoracic or respiratory disorders which may occur in typhoid.

Bronchitis. In the early stages even, of typhoid fever, a moderate degree of bronchial catarrh is so common as to

be part of the typical picture of the disease. As a rule it is mild and often overlooked. It was present in degree sufficient to be noted in the history of 54 per cent. of my own cases, and Louis found it present in thirty-eight out of forty-eight cases. Though often unnoticed, its presence may be of help in the early diagnosis of a suspected case. There is little cough, as a rule, without much expectoration, though it may be harsh and annoying. Examination of the chest, which is frequently omitted in the absence of complaint of cough, shows rather abundant dry râles, but there is almost invariable absence of coryza, sneezing and the usual catarrhal accompaniments of an ordinary bronchitis.

The occurrence of such a bronchial irritation, with diarrhoea and headache, is almost pathognomonic.

Pathologically the condition is one of congestion, but the more thoroughly the examination post-mortem is made, the more often are found small ulcerations similar to those seen on the posterior wall of the larynx and epiglottis, and due, as a rule, to erosion of a mucous membrane rendered vulnerable by toxines. In several cases, however, Eichorst has found the bacillus of Eberth in the ulcerations. The examination of the trachea is not a routine in most post-mortems, and so the presence of these lesions is passed over, but I was struck by their very frequent occurrence when looked for in a series of autopsies at the Boston City Hospital in 1891-'93.

In rarer instances, however, this primary bronchitis may be violent, and quite obscure the real nature of the disease, especially before the temperature is very high; but if the bronchitic in-

vasion of typhoid be so severe as to appear the primary disease, the patient is much sicker than he would be from a simple bronchitis. The temperature is higher and more pronounced. There is greater headache and prostration, and a decided apathy, in which the patient complains much less of the cough than the signs would lead one to expect. There is a disparity between the slight subjective and marked actual dyspnoea that should excite suspicion, which the presence of an enlarged spleen and intestinal symptoms strengthens. The continuance of the severe bronchitis for seven to nine days, till the occurrence of rose spots or Widal reaction, shows the illness to have been only typhoid from the start.

As an example of this condition I relate the following case:

Case I. Mrs. I. M. G., aet. 32, came under my observation September, 1892, with a history of nine days' illness, beginning with a chill and great headache. There was intense and incessant cough, with very sticky expectoration and great dyspnoea. Until this time there had been no abdominal symptoms. Temperature, 102°; pulse, 140; respiration, 44. Patient was very dusky and there were many fine, moist râles and sibilant râles over both chests. The spleen was enlarged and there were rose spots. She later developed right lower broncho-pneumonia. The case otherwise ran the course of an ordinary typhoid, with recovery.

In his second series of 160 cases at Johns Hopkins Hospital, Osler³ reports one such case which proved fatal, with an intense acute bronchitis of the suffocative type, with snoring, bubbling râles throughout the entire chest, and such intense cyanosis that venesection

was resorted to. Autopsy showed it to be a case of typhoid.

Another case which came under my own care was that of a man 18 years old, whose illness began with a slight chill, malaise, cough and very great hoarseness. At the end of one week he was seen, with a temperature of 103°, pulse 100, respiration 32, and a marked bronchitis. There were also rose spots and enlarged spleen. The bronchitis subsided and the case ran an ordinary course.

An even more marked case is reported by Bayer and quoted by Hare,⁴ of a patient who complained of aphonia and dysphagia due to acute laryngopharyngitis: "The local symptoms were improved by treatment, but in a few days the man was seized with a severe chill, followed by fever and pain in the throat, an examination of which revealed a number of small superficial ulcers on the soft palate and pharynx. Later the characteristic rose spots appeared on the skin. Bits of tissue removed from the ulcers contained the bacillus of Eberth." The patient died from intestinal hemorrhage and pneumonia.

Such primary ulceration within the larynx may account for the cases of violent cough at the outset of a typhoid fever when the chest shows no signs of unusual irritation.

The laryngeal complications, however, occur usually late in the disease. They may be simple ulceration from necrosis of the mucous membrane, or from invasion of a damaged tissue by micro-organisms from the mouth and pharynx. Such destruction, often seen on the arytenoids, may be hastened by pressure from the recumbent position, and the infection may extend deeply,

³ Johns Hopkins Hospital Reports, Vol. V.

⁴ "Medical Complications of Typhoid."

causing perichondritis and necrosis of the cartilages. Perforation into the mediastinum has occurred with subsequent suppuration in the chest. Oedema of the glottis has been rather frequently reported, especially in some epidemics, and there is record also of a membranous laryngitis, due to a mixed implanting of Eberth's and Klebs-Löffler bacilli.

Pneumonia is by far the most common thoracic complication of typhoid fever. Harley, indeed, calls it the most common of all, and Fox says that, next to measles, typhoid is the disease most commonly accompanied by pneumonia. In the later stages of typhoid, areas of catarrhal, lobular or broncho-pneumonia frequently occur, resulting from hypostatic congestion, or very often from the bronchitis just described. These patches thus caused or due to the direct effect of the toxine of the fever, may be quite extensive, but rarely, if ever, develop before the second week of the pronounced disease. For certain reasons I will speak of this complication later.

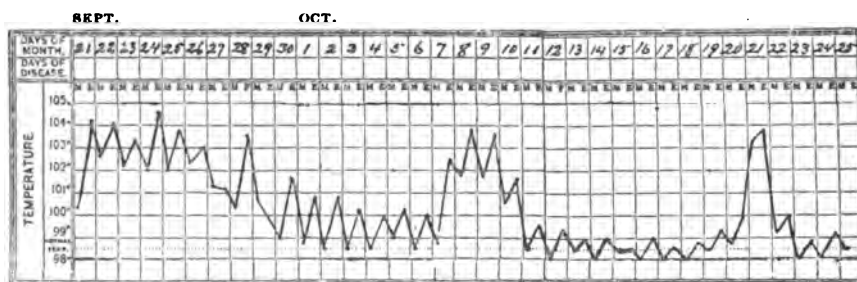
A fibrinous or croupous pneumonia is a frequent complication during the course of typhoid fever. It usually oc-

toxines of the bacillus typhosus. Occasionally in these cases of intercurrent or subsequent pneumonia in typhoid, Eberth's bacillus has been found associated with Fränkel's pneumococcus in the exudate (Chantemasse, indeed, has found the typhoid bacilli in the sputum of such a case), but in all cases bacteriologically studied so far, the diplococcus has been found as a causative agent.

A good example of this occurrence of a true croupous pneumonia during the course of a typhoid fever was a patient whose chart I show you.

A. J., a girl of 19, was seen September 20. With a history of exposure to typhoid, she had been ill for four days with headache, and presented a clear picture of the disease. Temperature, 103° ; pulse, 120. Rose spots, abdominal tenderness and enlarged spleen. The disease ran a normal course. On October 7 there was a sudden rise in temperature, but no pain. There was scarcely any cough, and but little rusty sputum. Examination showed signs of consolidation in the lower lobe of the right lung.

The second rise, October 21, was due to a small axillary abscess.



curs after the disease is well under way, in the second or third week, or during the early days of convalescence, and is due to an invasion by the diplococcus pneumoniae of Fränkel, whose growth is favored in the lungs by the

While the onset of such a pneumonia may be marked by a chill, the rigor is seldom severe, and is often wholly absent. The farther along in convalescence the patient is, the more likely is the chill to be present, while in cases

occurring early in the second week, while the typhoid temperature is high, there may be little to call attention to the new infection, save a lessening of the morning remission of temperature and some increase in the respiration rate. There is, curiously, not often any severe pleural pain, and the cough may be very moderate. The rusty sputum, too, is frequently wanting or scanty.

With a rigor and pain or cough, the diagnosis is suggested, but any irregularity in the temperature curve, a sudden rise if it be low, or an increase in the respiration rate—not due to weakness or dyspnoea from intestinal distension—should lead to an examination of the chest. Dullness or flatness on percussion, bronchial breathing and increased fremitus make clear the diagnosis. The patch may involve the whole or only part of a lobe, and is often overlooked. I doubt not it is the true explanation of some short relapses, so-called.

Osler reports its occurrence seven times in 229 cases⁵. Two cases were fatal; one a severe pneumonia which was regarded as the primary disease until autopsy, the other a pneumonia and pleurisy in a young adult whose pulse had been alarming before the occurrence of the complication. The other five were not extensive and the diagnosis was made upon finding an area of definite dullness and tubular breathing. The care of such complications involves no peculiar difficulties.

A croupous pneumonia may, however, mark the beginning of typhoid fever. Here the correct diagnosis of the real disease is more important and far less easy, and it is from these cases that much confusion has arisen in the

past regarding the development of typhoid fever from pneumonia. The patient is seized with a chill, pleuritic pain and high fever. Examination shows all the symptoms and signs of an acute pneumonia. At the usual time of resolution the temperature does not fall, or, if it falls a little, soon rises again to become remitting in the morning. Examination previously omitted perhaps shows rose spots and an enlarged spleen, and as Hare says, "the possibility of the disease being typhoid comes upon the mind of even the careful physician for the first time."

With our present knowledge of bacteriological pathology we know that a case like this can be one of but two conditions. It is either a double infection with the diplococcus of Fränkel in the lungs and the bacillus of typhoid affecting the intestines, the latter infection not showing clearly till the shorter and more violent disease is past, a *pneumonia and typhoid*, or it is simply and solely a typhoid invasion from the start, with an unusual and primary involvement of the lungs by Eberth's bacillus—a *typhoid fever starting in the lungs*.

In 1875 Dietl said that the poison of typhoid might attack the lungs instead of the intestines, and we now know that the bacillus typhosus can and does cause a true croupous pneumonia.

Bruhl reports in the Gazette Hebdomaire one of the most typical cases of this kind which I know. An adult patient in good health was taken suddenly ill with the symptoms of acute pneumonia. On the eighth day a roseolar eruption appeared, followed by the other signs of typhoid fever, with intestinal hemorrhage and perforation. Eberth's bacillus was found in the pus in the peritoneal cavity, and

⁵ Johns Hopkins Hospital Reports, Vol. IV.

also in pure culture in the blood from puncture in the lung.

Pneumonia occurring in old or broken down persons, in those with impaired kidneys, or from the virulence of the infection, may often present the picture of great prostration, muttering delirium, subsultus tendinum and sordes. For the sake of clearness and accuracy such cases should be termed septic pneumonia, reserving the word typhoid for a true relation to Eberth's bacillus.

A true pneumonia due to Fränkel's diplococcus can not turn into typhoid fever if Eberth's bacillus be not present, and if it is present we are dealing with a double infection.

Returning to the cases of pneumonia which turn out typhoid, they are, as I have shown, either a pneumonia and typhoid double infection or a pure typhoid affecting the lungs primarily. It might be said that these cases differ in bacteriological rather than anatomical interest. This is quite true, and so far as the care of the case at the start is concerned it makes no difference, but a careful study of all the facts may lead us, with our present knowledge, early to suspect that we are dealing with more or other than a simple pneumonia, and so avoid the necessity of an amended diagnosis, which, should the case do badly, might cause the family to think of primary mismanagement. One such unfortunate case I have in mind, and Hare reports one in which this recollection of an unusual invasion of typhoid led to a happy provisional diagnosis.

What are the chief points of diagnosis? In the first place, the double infection (of pneumonia and typhoid) at the start is very rare indeed, and probably the larger number of cases

starting in as pneumonia and resolving into typhoid are truly typhoid fever from the beginning—the lung invasion form. We may, therefore, see if we can distinguish early between a pure pneumonia and the pneumonic form of typhoid fever. A history of exposure is only occasionally at hand, and previous malaise is mostly wanting in this sudden form of typhoid. Even the history of exposure to typhoid may be misleading, as in a case reported by Taylor of Guy's Hospital. Here, in a much-overworked person, a definite exposure to typhoid was followed, after a chill, by a temperature of 104° p. m., 101° a. m., 104° p. m. After some doubt for a day or so the case proved one of simple, uncomplicated pneumonia.

In the initial pneumonia of typhoid the initial chill is less severe than in pneumococcus pneumonia as a rule, and the temperature rises more rapidly than in ordinary typhoid.

There is rather less pain and the signs are those of moderate dyspnoea, without marked coughing. The sputum may be rusty, but it should add to the suspicion of typhoid if it is not.

Herpes, so rare in intestinal typhoid as to be of negative value, may be found in such cases of typhoid. The only two instances of herpes in typhoid Osler saw were in cases of pneumonia complication. The absence of cold sores throughout a sharp pneumonia might lead us to suspect its possible typhoid origin.

Early diarrhoea and duskiness, with rapidly enlarging spleen, are signs in favor of typhoid. Blood examination is of but little help, for with the extensive involvement of the lungs there will probably be some leucocytosis even in typhoid.

It must be largely the trained judgment which approaches intuition that sees the probable diagnosis before the rose spots appear at the end of the first week, or Widal's reaction is obtained, rarely till later. The recollection that typhoid may begin with pneumonia, or more rarely be coexistent with it, is of great help. A dicrotic pulse is, perhaps, one of the most useful single signs, for the true dicrotism appears so much earlier in typhoid than other febrile diseases as to be of some diagnostic value.

Pleurisy, dry or with effusion, may occur at the outset of typhoid, but with the greatest rarity, and it is a very infrequent complication at any stage of the disease.

Osler reports but five instances in 489 cases; in two there was an acute pleurisy at the outset; in two a moderate effusion later in the disease; in one case there was a late occurrence of a dry pleurisy.

Achard* reports two cases of pleurisy; one with effusion, the fluid of which gave a Widal reaction.

The occurrence of a pleurisy is usually secondary to a pneumonic complication. It may, however, be due to direct invasion of the pleura by the typhoid bacillus, in which case it is most apt to take the form of an empyema, but one readily amenable to treatment.

Abscess, gangrene and infarction are all rare complications and secondary to others, such as pneumonia or infected areas of hypostatic congestion. The symptoms, diagnosis and treatment of abscess and gangrene vary in no way from the usual. Small areas of infarction are generally overlooked or confounded with patches of hypostasis,

from which they offer no different signs, save the known presence of a possible source for embolism. It is doubtful if they ever occur from ulcerating patches in the bowel. It is only from thrombus elsewhere.

Oedema of the lungs must be considered as a circulatory complication from failing heart rather than a truly pulmonary disorder.

A *tuberculosis* may be implanted upon an unresolved patch of pneumonia, or an old tubercular infection, latent and never yet active, and may find in the lowered vitality of the convalescent its opportunity to spread. Both these conditions, however, partake more of the character of sequelae than of true complications. The possibility of the supposed typhoid preceding a rapid general tuberculosis having been not typhoid at all, but tubercular fever, must be borne in mind. The discussion of this interesting and most difficult diagnosis does not belong to this paper, however.

Returning for a moment, before closing, to the cases of broncho-pneumonia. These areas are evidence either of a feeble circulation allowing congestion, which is favored by the prolonged recumbency of the patient, or of a nervous system so blunted by the toxins of the disease as to allow inhalation and deglutition infection. They may be due directly to the action of the toxin and phagocyte cells upon the lung tissue.

Found mostly at the bases and along the spinal furrows, these areas of pneumonia may cause even fewer general symptoms than the fibrinous form, but they may be suspected from an increased rate of breathing and a dusky, ashy cyanosis. They should be watched

* Sem. Med., October, 1898.

for as a routine in all cases. Examination with an ear keen to detect impaired breathing will discover their extent. The first evidence of their occurrence should be the sign for stimulation by alcohol, strychnine or ammonia.

More than any other of the pulmonary complications of typhoid can this catarrhal pneumonia be avoided by diligent and good care. The proper ventilation of the sick room, with abundant fresh, cool air to breathe, and proper care of the mouth and pharynx will remove a large source of danger from inhalation. Attention to the teeth and tongue, keeping them clean and moist, rinsing carefully after each feeding, is not a matter of esthetics only. Great care and avoidance of hurry in feeding patients who are dulled by the disease is necessary to prevent a deglutition pneumonia. The maintenance of a good circulation is important in preventing this pneumonia for two reasons. With a strong heart and good circulation there is less risk of congestion from hypostasis with its ground for infection, and secondly, with a strong blood current, the toxins which we saw at the first have a direct damaging effect upon the tis-

ues of the lungs, are swept along and washed from the tissues with less delay before elimination. The value of this quick current and rapid elimination can not be underestimated, and nothing gives this aid to the circulation so well as does cold bathing.

Whether the application be made by the regular Brand bath, *properly given with friction*, a very difficult task in private practice, or, as I personally much prefer, by repeated cold sponging, the effect is to bring to the help of the heart the powerful pumping action of the cutaneous vessels. As Stockton says, "the chief factor in its curative effect is not the mere mechanical reduction of temperature, but the marked improvement in tone, first in the peripheral cutaneous, and then in the general vascular system. This it is which drains and empties the engorged lymph spaces of their poisoned food materials; that relieves congestion in the hepatic and pulmonary circulations; that throws the full volume of blood through the anaemic and paralyzed kidneys." It is by stimulating what Woods Hutchinson calls the "skin heart" that we do most to prevent and modify the catarrhal pneumonia of typhoid.

Is Change of Climate a Necessity for Successful Treatment?*

By CHARLES DENISON, A. M., M. D., DENVER, COLO.

To the average Colorado physician this is a queer question, and the wonder is that it should be proposed at all, after all the favorable evidence we have had. The surprise that this issue is raised, as to the value of climatic change, is increased as we strip the

subject of impracticabilities. The negative side of this discussion should not try to force the affirmative to show that the "change" is possible. The affirmative have a right to assume, as a condition precedent, that it is not only possible, but feasible. But you say nine-

* Written for the discussion at the late Tuberculosis Congress held in New York.

tenths of the tuberculosis existing is associated with poverty and its environments. Very true; but this, though a potent fact to be intelligently dealt with, is not the question now at issue. The only possible qualification of this word "necessity" is suggested in the phrase that follows, "for successful treatment," i. e., that there is some other single line of treatment, opposed to the change, which is superior to it. The question then arises: What are the environments or conditions of such other "successful treatment" that individualized selection of climate cannot be utilized? Is it not that some unreasonably boomed hobby has to be first considered, some local prejudice to be conceded to, or because some home sanatorium is recommended? If possible (?) let us, as physicians, divorce this question from personal advantage or local prejudice. Let our argument be untarnished by such defects.

The question should properly be, and this is what I claim we are discussing: *Other things being equal, is change of climate a necessity for the best results in the treatment of tuberculosis?* Looking at it in this light, we are not to be burdened with anxiety for the surrender of an individual's calling and the pecuniary sacrifice involved in the change. Neither are we to be prevented from adopting any desirable additions to the climatic prescription. It is climate *with* these aids, and not *in opposition* to them.

Such a consideration of the subject practically admits the fact that the best method of treatment is a combined or combination one. Why, then, should not any other successful treatment enter the combination together with change of climate, in order to give the

largest percentage of results possible for each individual case?

If it were climate *alone* which was to be considered, the issue would be gladly accepted as between this and any other single method of treatment. This would necessarily involve the adjustment of the season of the year, altitude, dryness, etc., to the patient's individual needs. It is doubtful if any one remedy yet discovered excels in benefits conferred a proper change of climate and environments in curable cases, and in some others for whom only prolongation of life is possible.

All students of climatology, especially if they have had any personal experience in well chosen high altitudes, admit the desirableness of such a change. The reasons for a change may be, and often are, used to further the local claims of certain sanatoria; but we, in discussion, should consider these reasons impartially, with the view of arriving at an *ideal* climate, decided upon without reference to any particular locality. This argument for an ideal climate for the majority of consumptives has been¹ variously reiterated by me, and is summarized in five main propositions:

1. "Dryness opposed to moisture."
2. "Coolness or cold preferable to warmth."
3. "Altitude preferable to sea level pressure."
4. "Sunshine to cloudiness."
5. "Variability preferable to equability." The latter because a certain degree of *variability* is a *sine qua non*

¹See two reports to the International Medical Congresses, 1876 and 1887; the article on "Climate Treatment" in Foster's Practical Therapeutics; and in Journal A. M. A., November 7 and 14, 1898, a later article on "The Climate of Colorado for Respiratory Diseases."

of the preferable combination of climatic attributes constituting *ideality*, including, for the majority of chronic pulmonary invalids, rarefaction of the air. An unbiased analysis of these five propositions, together with a due consideration of the questions of air-diathermancy, the radiation and absorption of heat, the mountainous configuration of the soil, the physical benefits of moderate winds, electric stimulation and other peculiarities of elevated resorts, will convince any investigator of the soundness of the climatic argument. This method of analysis culminates in the crowning evidence of *immunity*, partial though it may be, which increasingly manifests itself as the ideal climate for the individual patient is reached. On this is based the unanswerable argument which is attested to by the ample experience of thousands of invalids in the elevated western states.

In a paper of this kind, one is necessarily limited in the presentation of details. You must not be fatigued by the countless illustrations possible. I would like, however, to present the following case, because its favorable result, due wholly to climatic effect, challenges any experience possible at the seaside or in the lowlands:

December 19, 1899, Mr. W. A. M., age 42, accountant from an interior town of Colorado, was seen by me for the first time. Twenty-four years ago he had come from Newark, Ohio, one year after a "cold," following chills and fever; had then night sweats, etc., and had yellow expectoration for one year! Probably breaking down of lung tissue occurred then, for he had no night sweats or fever or severe symptoms in Colorado, except in 1896 he had hemorrhages at his present home at an ele-

vation of 8,000 feet. Previously to that he had lived on a ranch at a lower elevation, 6,500 feet. Though with marked inheritance to tuberculosis, improvement at first, in 1875, was so decided he tried again to live in Ohio, but had to relinquish this idea and come back to Colorado within one year after his return East. The present condition is the most remarkable of the many arrests of consumption I have ever seen. The right lung is enlarged downwards and inwards, and the left lung is apparently all gone except that portion in the front part of the chest and above the heart. The heart is now moved to the left, and the apex beat is in the axillary region in the fifth interspace. An excavation extends from the latter point around underneath the scapular and left inter-scapular space and upwards to the left clavicle. Yet for years he has held his weight at about 118 pounds (height, 5 feet 5 inches), pulse is 80, respiration 20, and spirometrical record 140 cubic inches; rides horseback, holds a clerkship, and talks of matrimony. "One swallow does not make a summer," to be sure, but the question is a fair one: *Under what opposite or different climatic conditions could such a result be obtained?*

In conclusion, it is evident that when we compare climatic influence with the other agencies for good in our curative prescriptions for tuberculosis, we can justly conclude that it should stand first of them all. The consensus of the opinion of medical men would place it, with its hopeful mental effect, among the most curative means from which we can select our combination treatment.²

²"The Modern Treatment of Tuberculosis." Report to A. M. A., 1898, Journal, September 24, 1898.

Neither is it difficult to link this means to the other curative aids, for the criticism of *poly-pharmacy* must not be allowed to shut out anything that will help.

Next to climatic change, and necessarily linked with it, and about equal to it in importance, comes *out-of-door life and exercise*. This and climatic selection combined amount to 30 to 45 per cent. of what can be done for active, germ-proved cases; while, in latent and inactive cases, they may be said to perhaps represent from 45 to more than 70 per cent. of the cure. Then, admitting that the combination of curative aids should be individual and different for different classes of cases, we ought to have the four following divisions, each of which may be variously estimated to make up from nothing to 20 or 25 per cent. of the to-

tal of good to be accomplished, namely:

3. "Good feeding, special dieting, and attention to the alimentary canal."

4. "Medical supervision and medical treatment."

5. "Inhalation, local medication and surgical interference."

6. "Specific medication, based on anti-toxin treatment."

Duly weighing all these means that are helpful, and having in mind as much of *approximate immunity* as is possible to obtain in each individual case, we may, I think, safely conclude that there is no single agency equal in lasting results to a suitably adjusted change of climate. For, where it can be had, it implies going from causative to curative conditions, an improved mental influence, and, in the utilization of the new climate, an out-door life or occupation.

Causes and Treatment of Acute Coryza.*

By MELVILLE BLACK, M. D., DENVER, COLO.

Professor of Ophthalmology and Otology, Gross Medical College.

We assign "taking cold" as the cause of acute coryza. The condition is commonly known as a "cold in the head." This is not the case. It is no more a "cold in the head" than is the eruption of an exanthematous fever the disease itself. It is a symptom of a constitutional disturbance. Just what constitutes the pathological change which presents as its principal symptom an acute coryza is a question that has long been debated. I feel my inability to discuss it. When asked to do so by your president, my excuse for accepting was that what I might have to say would do no harm.

My theories as to what a cold is change from year to year, or at least undergo slight modification. At present I am in accord with those who hold that it is a sudden disturbance of the caloric functions of the body. We will interest ourselves with the causes of this caloric change.

Why is it that we are so constituted as to "catch cold?" Is it not a fact that animals, not provided for by man rarely "take cold?"

Man is a creature endowed with intelligence and reason, and not with instinct. He creates for himself and for those who follow him certain laws

* Address to the Denver and Arapahoe Medical Society, March 13, 1900.

which govern his methods of living, namely, eating, dressing and sleeping. Let us see if these laws work to his greatest physical well-being.

Our natures crave food. Our intellect has enabled us to change the raw material into such palatable form that the appetite is greatly tempted. This has become an art. Nature has provided us with a cutaneous covering for the body, which was undoubtedly intended to protect it. Adam and Eve were placed in the Garden of Eden naked. What a change from the fig-leaf to our present methods of dress! The clothing of the body has also become an art. The day is divided into two distinct parts, but man with his insatiable appetite for work and play has invented a way of manufacturing day that enables him to pursue his bent until tired nature rebels. As Cy Warman puts it,

"It's day all day in the daytime,
And there is no night in Creede."

The individual who makes his living with his brain and not with his hands, eats too much and exercises too little. The result is faulty digestion, faulty assimilation, faulty combustion and cell metabolism. Waste products accumulate in the system, and are stored up only to explode and upset the vasomotor nerve system.

The principal functions of the skin are to clothe the body and protect it against sudden atmospheric changes, and to eliminate from the body certain effete products. In the performance of these functions the skin acts as a safety valve. By the exercise of its functions the blood pressure may be quickly lowered or raised, and the temperature of the blood cooled or raised in accordance with the necessities. It is very apparent then that the uses of

the skin are really only the means by which the more important ends are reached, namely, the maintenance of a standard temperature of the body, and an equalization of the blood pressure. It is a well-recognized fact that for any organ of the body to remain normal and capable of work it must have work to do. The more we relieve it of this work the less it will be capable of performing. Just so it is with the skin.

We apply warm flannels to a newly-born infant and smother it in a cradle covered from head to foot with a beautiful blanket made by some kind friend. It is bathed in warm water in a warm room daily, and hurriedly swathed again in flannels, and is put to sleep in a warm room. Now feel it. It is hot, it is perspiring, but not a breath of air must touch it, for it would "catch cold." Poor baby! it does the best it can to prevent such treatment; it yells, but all to no purpose. As a result of this treatment the skin of this infant is never called upon to perform its full function. The work is done for it. Instead of being allowed to protect the body, it has, by virtue of its own sensitiveness, to be protected; if not, the penalty is a cold—the baby has the snuffles, scientifically known as acute coryza. What chance has an adult after a life of such coddling of the skin?

Man loves luxury. He surrounds himself with every comfort that his means will afford. He is kept warm by artificial means in infancy, until in after years such means become a necessity to his comfort. The warmer he dresses the warmer he has to dress. He feels the necessity of having a warm house. He has always lived in one. If the temperature therein is nearer ninety than seventy he is still

happy. Even the street cars must be warmed. He sleeps in a warm room. He does not remain in a cold place a minute longer than he can help. Poor creature! Is he to be envied?

You say these are extremes. So they are. It is the extremes that are killing us. We tend to the extreme in everything that should be used in moderation.

I do not pose as a reformer. I have been so spoiled myself that I feel that I can not make any radical changes in my methods of living. I would rather "take cold" occasionally. The question is, can we make some changes that are not too radical that will enable us to be comfortable and yet improve the tone of our internal resistance to atmospheric changes? I think this question can be answered in the affirmative.

We must begin with the infant. Its skin should be recognized as the natural covering for its body, and whatever additional covering is added should be of such a character as will not keep the air away from it. We must learn that when the skin throws off perspiration it does so that it may be evaporated in order to cool the body. You say if the perspiration is too rapidly evaporated the body will become chilled, and a "cold" will be the result. This is true if we have destroyed the activity of the skin by overprotecting it from birth. It is not true if the skin has always been allowed to perform its full function.

I do not contend that man should run naked, but I do contend that his clothing should be of a character that will admit of free passage of air to the skin. Underwear, if worn at all, should be worn for sanitary reasons, and not because it affords the skin any protection from the cold. The underwear,

therefore, should never be made of wool. Wool should be used only for the outer garments. The material worn next to the skin should be linen. It should be of a very loose weave. Linen takes up water quickly and it dries quickly. The outer clothing worn in winter should be little or no heavier than that worn during the summer. The reason for this lies in the fact that the rooms we live in during the winter are usually as warm as during the summer. When out of doors the weight of the overcoat should be in proportion to the severity of the weather. A cold bath should be taken every morning and the body freely exposed from fifteen to thirty minutes, during which time active exercise should be engaged in. I may add that I have been putting the above theories into practical operation for five years, with the most gratifying results to my patients and myself.

The best treatment for acute coryza that I know of is to prevent its occurrence. The cure must begin with the infant. Therefore, for a few years yet (?) we must resort to medication for the relief of our cases of acute coryza. I have nothing new to present that is in any way specific in the treatment of this condition. Suffice to say, that the use of salicylates, if pushed at the beginning of an attack, will be found to be nearer a specific than any other form of medication.

Miss Freda A. Volkhardt of Chicago, formerly a nurse at St. Luke's hospital, Denver, and Dr. Victor A. Bles of Denver have united their fortunes, the matrimonial knot being tied by Rev. Jennings. Both have our congratulations and hearty good wishes.

The Prevention of Diseases of the Eye During Childhood.*

By E. W. STEVENS, M. D., DENVER, COLO.

The last years of the nineteenth century have witnessed many remarkable advances in medicine and surgery. One of the most important of these has been the rise of preventive medicine. In no other age of the world has there been so general and active an inquiry into the causes of disease and the measures to be employed in preventing it. This spirit of inquiry has reached, to some extent, the laity. Even the man on the street realizes the importance of aseptic surgery in preventing suppuration, and instead of regarding typhoid fever as a visitation of Divine Providence, looks closely after the family water supply and the condition of the drain, and relies upon an energetic board of health to protect the community against an epidemic of smallpox.

Preventive medicine can have no more important or fruitful field of application than is presented by the care of the eyes during childhood. During the past twenty-five years this subject has attracted the careful consideration of many of the best ophthalmologists in all civilized countries, and its importance is beginning to be appreciated by physicians, parents and teachers. Some idea of the great importance of this subject may be drawn from the fact that Hasket Derby found in the 183 inmates of the Perkins Institute for the Blind in South Boston there were 27 per cent. of absolutely avoidable cases of blindness. Professor Cohn cites the statistics of 70,174 cases of eye diseases from his Wiesbaden Clinic and finds that 40 per

cent. of the cases of blindness were avoidable. Many other competent observers have arrived at similar conclusions.

According to the census reports of the United States for 1890, out of a total population of 62,622,250, the total number of cases returned as blind in both eyes was 50,411, or one blind in every 1,238 inhabitants. Of persons blind in one eye only, there were reported 93,988. The proportion of the blind to the entire population varies in different countries, the percentage of the United States being slightly below the world's average.

Of the 50,411 cases of total blindness in this country, 14,612 became blind before the twentieth year of age, and in 5,790 cases the age at which blindness occurred was not reported. According to Magnus, the first five years of life present the greatest degree of loss of sight, and a detailed study of the census of 1890 shows that the proportion of blind rapidly increases up to the age of twenty, while between the ages of twenty and thirty there is no increase or an actual decrease. It is greatly to be regretted that the department of the census bureau, which deals with vital statistics, is not under the management of physicians and that the census statistics of the entire country as to the cause of blindness are too superficial to be trustworthy. In fact, we have no published statistics that represent the frequency of the different causes of blindness in this country, and, as Dr. E. Jackson has insisted, it is mani-

* Read before the Denver and Arapahoe Medical Society, March 27, 1900.

festly unfair to draw from German statistics inferences regarding eye diseases in this country, which depend largely on social conditions and customs.

The statistics of German blind asylums show 30 per cent. of their inmates, blind from ophthalmia neonatorum, and Magnus found that it caused 10.9 per cent. of all cases of blindness. There are no sufficient data regarding the frequency of blindness caused by this disease in the United States. The majority of the committee on resolutions relating to the purulent ophthalmia of infancy in their report to the American Ophthalmological Society, in 1898, states, "On the basis of calculation established by well known data, it is safe to say that out of about 50,000 blind persons in the United States a little over 5,000 have lost their sight from ophthalmia of infancy." While this calculation, based upon German statistics of the disease, is probably erroneous—being altogether too high an estimate—there is no question that every year hundreds of children in this country become blind, while hundreds of others lose sight in one eye or suffer all their lives from impaired vision as the result of ophthalmia of infancy.

Ophthalmia neonatorum presents one of the most gratifying instances in preventive medicine, since, with appropriate treatment, infection can be prevented in the large majority of cases. The prophylaxis should begin before birth, by the use of the antepartum douche, for, in most cases, infection occurs during the passage of the head through the vagina. The child's eyes should be at once cleansed after birth of the head, by washing the outside of the lids with bits of

gauze or absorbent cotton dipped in sterilized water or boracic acid wash. Whenever there is any probability that the mother has been infected by gonorrhoea a few drops of a solution of ten grains of nitrate of silver to one ounce of distilled water should be instilled into the child's eyes. At each subsequent visit the obstetrician should never fail to carefully inspect the child's eyes for symptoms of beginning ophthalmia. He must not confound a simple form of conjunctivitis with true purulent ophthalmia, and be led into treating it in too energetic a manner, thereby aggravating the condition and often inflicting damage.

As the result of what can be done by a careful obstetrician towards preventing ophthalmia of the new born, the experience of Dr. Joseph Price at the Preston Retreat, Philadelphia, may be quoted. Dr. Price, in 1,400 deliveries under his care at that institution, reports three cases of purulent ophthalmia, of which he says: "All delivered before toilet could be made, one in the street, one in the hall and one in the bath." Dr. Price is known to be fierce in his advocacy of obstetrical and surgical cleanliness.

An analysis of the United States census report for 1890 shows that 7,134 persons, or nearly 20 per cent. of the cases of blindness from known causes, were due to injury; 117 cases were under one year of age; 356 were between one and five years; 516 were between five and ten years, while 903 were between ten and twenty years of age, making a total of 1,892 cases of blindness due to injuries, under twenty years of age. The cases of blindness of one eye, from injuries, are even more frequent. According to the same report, of the 93,000 cases of blindness

of one eye in this country, 44 per cent. were due to injury.

The lamentable loss of sight during childhood, from traumatism, is owing chiefly to three causes: The criminal carelessness of parents and nurses in permitting small children to have sharp-pointed instruments for playthings, the deadly toy pistol, and the use of the Fourth of July fire-cracker. Of the large number of children who have escaped loss of sight in one eye, but suffer from great depression of vision as a result of injury, we have no record, but as children furnish a large number of all the injuries due to explosives in this country, their number must be considerable. Most of these injuries are plainly avoidable.

Strumous ophthalmia or phlyctenular kerato-conjunctivitis often causes damage to sight by the formation of opacities of the cornea or the production of irregular astigmatism. Occurring, as it most frequently does, in children with a tendency to glandular enlargement and to catarrhal affections of the whole cephalic mucous membrane, most cases of this disease can be prevented by plenty of pure air, attention to proper diet and prompt treatment of catarrhal diseases of the nasal passages.

Most cases of the disease can be traced directly to fried foods, tea, coffee, cake and sweetmeats. Parents can not be impressed too frequently with the fact that the diet of children should be made up largely of milk and well cooked farinaceous foods.

The treatment of strabismus by the use of atropin, the correction of errors of refraction, and the employment of measures aiming to improve the vision in the deviating eye, is one of the most striking examples of what can be accomplished by preventive medicine.

Most cases of squint are capable of cure, without operation, when they come under the care of an ophthalmologist at an early stage. At first the squint is usually periodic, coming and going with accommodating effort or when the child is tired, but in time becoming continuous. Chronic monocular squint is always attended by the loss of binocular vision and the suppression of sight in the deviating eyes, the vision, in many cases, being reduced to the counting of fingers at the distance of a few feet. Since squint generally begins in early childhood, the parents frequently neglect to seek the advice of an eye surgeon, from a belief that owing to the tender years of the child, nothing can be done to remedy the condition. The modern method of measuring refraction by the shadow test has revolutionized our treatment of strabismus. It is often, therefore, an important question to decide at what age the required glasses can be worn. When needed, the glasses should be worn as soon as the child can be controlled, and many children at the age of three years wear glasses with a keen appreciation of the improvement in vision derived from them.

Before the child is old enough to wear glasses, the use of a cycloplegiac prevents the squint from becoming fixed. It may be used in both eyes to prevent accommodative effort, or in the better eye alone in order to blur its vision and induce the little patient to use the deviating eye. A shade worn before the good eye often accomplishes the same result.

In 1800 Dr. A. G. Beer first directed attention, in a treatise entitled "Healthy and Weak Eyes," to the fact that the requirements of school life re-

sulted in the impairment of vision of the eyes of many children. This point has been investigated by many competent observers in this and other countries and the eyes of our 200,000 pupils of all grades have been subjected to a critical examination. This investigation has shown that modern school work proves injurious to the eyes of many children and disastrous to the sight of others. From the kindergarten and primary school up to the universities the same effects have been observed, viz.: Many children enter school life with congenitally defective sight which not only hinders them in the school work, but often leads to permanent injury of the eyes. These congenital ocular defects are nearly always hyperopia and hyperopic astigmatism. In this country congenital myopia is extremely rare, but under the strain of an ambitious school curriculum many children acquire a progressive form of myopia, due to the stretching of the tunics of the eye-ball.

The amount and degree of myopia among school children are found to be directly dependent upon (1) the age at which near work is done; (2) the number of hours per day the child has been thus occupied; (3) the disabilities under which the tasks are performed—notably errors of refraction, poor light, vicious habits of study, ill health, etc. The admirable investigations of Risley and Randall among the school children of Philadelphia showed that in the primary grades, with an average age of eight and one-half years, the per cent. of myopia was only 4. In the same school, with an average age of eleven and one-half years, the percentage of myopia was 8. In the grammar school, with an average age of fourteen years, the per-

centage of myopia was 11. While in the normal school, with an average age of seventeen and one-half years, the myopia was 19 per cent.

Dr. Hasket Derby examined 254 students at Amherst College and four years later found not only that the 35 per cent. of myopia present at the first examination had increased to 47 per cent., but that the average degree of myopia had advanced from 1.8D to 2.4D. These students were from nineteen to twenty-six years of age and therefore beyond the years of greatest liability to progressive increase of myopia. The painstaking observation and study of modern ophthalmology has served to demonstrate forcibly the truth of the teachings of Donders regarding myopia, viz.: "The progressive elongation of the eye-ball and progressive short sight advance together and this advance is an actual disease. I maintain, without hesitation, that a short-sighted eye is a diseased eye. Progressive short sight is, in every case, ominous of evil for the future, for if it remains progressive, the eye soon develops painful symptoms and becomes less equal to its work and not infrequently at the age of fifty or sixty, if not much earlier, the power of sight, either from detachment of the retina or from hemorrhages or from atrophy and degeneration of the yellow spot, is irrecoverably lost."

The proper care of the eyes during school life includes not only the testing of the vision of every pupil at the commencement of each school year, and sending those who are found to have defective sight to an eye surgeon to be measured for glasses, but it also includes proper illumination of the school room and the avoidance of prolonged periods of near work. It im-

plies, moreover, improved, larger type in the text-books. It often happens that children who begin their school work with normal vision and little or no refractive error, at the end of school life are found to have myopic and diseased eyes.

Clearly the most important therapeutic agent is systematic prevention. With most diseases this is only a grow-

ing possibility, but in many affections of the eyes which impair vision or end in blindness, the dissemination of exact knowledge of the causes of those affections among physicians, parents and teachers, and the adoption of rational preventive measures will materially reduce the number of the vast army of totally blind and of the larger army which is crippled in the struggle of life by defective sight.

Clinical Report.

Dame Nature's Vaginal Hysterotomy.

By DR. CALVIN SKINNER, MALONE, N. Y.

I have been often solicited by professional brethren, to whom I have briefly related it, to publish the history of an interesting case which came under my professional observation more than forty years ago, and which, I think, will clearly show the steady advance of surgical skill over that of nature. The case was one in which the "vis medicatrix naturae," or the wonderful skill and recuperative powers of nature, were successfully applied in the amputation of the uterus, without the surgeon's aid or the clean cut of the knife. What makes this case more memorable is the fact that it happened at a period, according to my recollection, when only one or two reported cases of the amputation of the uterus had been performed by surgeons in this country, with what success I am unable to say; but this much I can say, that Dame Nature was wholly successful in her efforts in the case I am about to relate.

The surgeons living half a century ago were extremely shy of interfering with the abdominal cavity, and hesitated about using the knife in opening

the cavity except in cases of extreme emergency. This leads me to rejoice at the vast strides general, and more particularly abdominal, surgery has made in the last fifty years. To-day surgical skill does not hesitate to open the walls of the abdomen and sweep with the cut of the knife a part, if not the whole, of most of the organs that lie within the abdominal field, with the utmost confidence of ultimate success, emboldened, I have no doubt, by the aid of antiseptic remedies.

I call to mind a remark made by Professor Willard Parker more than fifty years ago, in a lecture delivered before his class of medical students. "Gentlemen," he said, "old Dame Nature is a wonderful old creature. She often attempts to display her natural skill and ability by removing those substances from the body which prove threatening and destructive to sound health, by her slow process of absorption; while at other times she assumes the role and skill of the expert surgeon by an attempt at removal of important organs by a slow process of ulceration, peculiar to herself. In these efforts she

is sometimes successful, but always at an enormous expense of vitality, loss of time, and great endurance of pain."

In the relation of this case, one of the most interesting things to be observed is the steady progress and advance of general and special operative surgery that has taken place within the last half century. I fear that an equal advance of pathological knowledge, or more successful results in the practical treatment of diseases, has not been observed in the last few years.

Now to the case in point: Mrs. C., the subject of this report, was about 28 years of age, 5 feet 4 or 5 inches in height, 120 pounds in weight, somewhat compactly built, with fair muscular development and florid complexion. She became pregnant soon after marriage and went through the period of gestation without meeting any untoward event; always able to attend to her household duties. At the time of Mrs. C.'s confinement there was nothing unusual about the progress of labor except that it was extremely protracted and made but little advance for two or more days. This protracted delay may possibly be accounted for by the fact that a "quack" had been called who claimed to understand his professional duties, but who had never had any practical experience, besides being extremely intemperate in his habits. Very likely Mrs. C. received very little assistance or encouragement from him. After two or more days the attendant became greatly alarmed at the serious condition of the patient, and left her to go for his obstetrical instruments, as he affirmed, but did not return. The same day Dr. Carpenter, of Bangor, was called in and, after a thorough examination of the patient, and seeing the sad condition she was

in, without any effectual labor pains and but little advancement made from her early efforts, immediately sent for his obstetrical instruments and an assistant, and directly proceeded to deliver his patient, which required considerable time and patience. Mrs. C. was safely delivered of a large male child, which showed indications of having been dead for some hours. Whether any injury was done to the soft parts by the introduction of the forceps, I can not say. Dr. Carpenter continued in charge of the patient for several weeks before I was called. I regret exceedingly not to be able to give the exact number of days it took Dame Nature to perform this delicate operation, having no statistics or dates to refresh my memory; still, I have the impression that it was about twenty days, or possibly a day or two more, from the day of delivery.

Some three weeks after Mrs. C.'s delivery her mother came to my office and urged me to visit her sick daughter, who she feared would not live many days. I could not refuse the request, as I had previously had charge of her family, and she expressed great confidence in my ability to save her child. As the patient lived some miles away, and as I had an engagement for the evening, I promised that I would be out in the morning. I reached the residence, according to my promise, at early morn, and upon entering the house the mother appeared before me, with tears streaming from her eyes, and upraised hands, frantically exclaiming, "Oh, doctor, I am afraid you are too late; I fear she is dying." At first sight, on reaching Mrs. C.'s bedside, I began to think that the mother's fears were about to be realized and

that the end was not far distant. There lay before me an emaciated, bloodless and cadaverous-looking object, prostrate and weakened to the extreme, as indicated by a tendency to slide toward the foot of the bed; in fact, Mrs. C. was only a shadow of her former self.

Taking in the alarming situation, I hastened to apply such remedies as would most quickly relieve her present sad condition, and in due time I was happy to see that my remedies were having favorable effect. The mother quietly asked me to step outside, for she wished to show me something that had passed from her daughter early that morning. Upon reaching the outside I was shown an old tin pan covered with cloth, resting upon the banking, in which I was astonished to find a pear-shaped uterus of normal size, perfect and entire in shape and consistency. I do not think Dame Nature displayed expert surgical skill in her work, for I observed ragged shreds of ligaments dangling from the sides, evidently not a clean-cut operation. Upon returning to the patient and making further examination, I was astonished to find a great quantity of sanious pus discharged, and still discharging, from the vagina. After placing the patient in as comfortable a condition as possible, I left, promising to meet Dr. Carpenter the next day. Upon my return the next day we were glad to find the patient as comfortable as could be expected, and we set about prescribing a course of treatment to be followed for a time, rigidly insisting upon perfect cleanliness and other measures which would most surely prevent blood-poisoning. It must be remembered that this was long before the introduction of antiseptic remedies

or the craze of the existence of germs and bacilli. I visited the patient with Dr. Carpenter several times and noted good improvement each time, especially at my last. In a few weeks I learned that the patient had so far recovered as to walk about the house, although still weak.

Three or four months afterward Mr. and Mrs. C. visited my office to consult me. The first salutation from the husband was: "Doctor, I have brought my wife out to see if you can not do something for her. She is not right, and never has been, since her confinement." I made a thorough examination and found that, after the expulsion of the uterus, the walls of the vagina had closed in upon each other and firmly united, forming a shallow cul-de-sac, greatly contracted, and hence the dissatisfaction and complaint. Mrs. C. lived three or more years afterward in ordinary good health, but died at last after a severe attack of typhoid fever.

I do not give this case to the profession for its uniqueness, but more particularly to show Dame Nature's wonderful attempts at surgical skill by her slow and lazy methods, and also to show her remarkable recuperative powers in taking the patient from death's door and restoring her to comparative good health; neither will I attempt to apologize for the unprofessional form or diction of the report of this case, for all must know that a head well whitened by the frosts of more than four-score years, memories forgotten, and the body bowed down by the weight of years, with all its accompanying infirmities, is not a fit head to write a report quite up to the full requirements of the present age.

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EDITORIALS.

THE DEAD BEAT QUESTION.

The "dead beat" element in a physician's practice is probably of comparatively little importance in the country and hamlets and villages, but in all cities of any considerable size its magnitude is great and increases with the passing of years and the growth of the population. Ever waxing in its proportions, it calls for radical treatment at the hands of the profession, but almost never is any adequate attempt at its ablation either conceived or put in motion.

One reason for this is the almost absolute absence of unity in the medical profession upon any question of detail whatever. There is a German proverb "Where ten German heads are present,

there there are twelve different opinions." The same holds true of physicians. They are seldom agreed as to what constitutes an evil, and if it should accidentally come to pass that they concur as to the existence of certain abuses and the desirability of their being done away with, there is no possibility as to unanimity on measures of relief. Each has his own pet device, which he insists is the only one worth considering, and expresses his determination of running amuck if it is not adopted.

In 1897 a certain smooth individual organized the Physicians' Mutual Association of Denver, with the ostensible purpose of collecting medical accounts which physicians were unable

to collect themselves or through their regular collectors, and to make monthly reports of the "dead beats" to every member of the association. Although in the course of six months the originator proved to be a "beat" himself and disappeared between two days, leaving numerous more or less acute mourners behind, the fact that the December report contained as the list of members the names of physicians and dentists to the number of 167 in Denver, 36 in Pueblo, 7 in Florence, 10 in Canon City, 8 in Cripple Creek, 25 in Colorado Springs, 3 in Littleton, and 4 in Grand Junction, is conclusive proof that a very considerable portion of the profession believed that physicians should, in some way, protect themselves in this direction.

That this opinion is not universally shared is likewise shown by the remarks of a prominent Denver physician. In discussing a collection agency which had recently been canvassing the members of the profession of this city, he said: "I think the doctors should have nothing to do with them. I do not approve of their methods. I think that they are entirely too commercial. Do you not agree with me?" The writer, not having at that time, fully decided that question for himself, was non-committal. His opinions on the subject having since then crystallized, he is willing to express them.

It is to be borne in mind that the subject under discussion is not the financial relationship of the worthy poor to the physician. That is an entirely different question and must be regarded from an entirely different point of view. We are not considering the "worthy poor" at all, but the "dead beat," and we should remember that the "dead beat" is never worthy

and infrequently poor. He is a swindler. He secures the use of the physician's capital, his knowledge, his time, his attention, perhaps his care and anxiety under false pretense; under the pretense that proper payment in accordance with the nature of the case and the patient's financial ability will be rendered the physician. When the time comes, however, and the bill is presented, no recompense is forthcoming, but not because of inability to pay.

The physician should also rid himself of the idea that the person having been sick the medical attendance was a work of necessity which the patient could not avoid, and therefore his financial delinquency should be overlooked. That is absolutely not the case in cities. The illness may have been severe and treatment necessary, but the services of the particular physician were not at all indispensable. Cities and counties maintain hospitals and employ physicians to look after the indigent sick. Medical colleges operate dispensaries at which they may receive treatment for the slight return of the instruction of the students.

Those are no places for our friend, the "dead beat," however. He is too proud to frequent the dispensaries. He is above going to the charity hospital or calling upon the charity physicians. He is no pauper. Indeed, no. He may live in the fashionable residence portion of his city. He may dress better than his physician. He denies himself and family few luxuries. His children may attend the most exclusive, select and expensive dancing school. He a pauper? Well, no! But pay his doctor's bill? Also no!

We should also remember that the beat is not grateful for the services he has obtained under false pretenses.

More than that, he is the worst enemy of the physician whose patience he has exhausted and who will no longer be victimized. While being treated the "beat" sings his physician's praises day and night, in season and out of season, —in the physician's ear. But with the request for payment, what a change! The amazing degree of ignorance displayed by the practitioner and the astounding malpractice performed are heralded to the four corners of the earth with increased assiduity.

Such being the case, the measures ordinarily proposed against the "dead beat" do not smack too much of commercialism. The physician owes it to himself to protect himself against such parasites and is simply deficient in ordinary every day common sense if he permits false ideas as to professional dignity to interfere with his exacting his due. He is a fool if he permits himself to be made use of by a known "dead beat," and he owes it to his professional brothers to make all "dead beats" individually and severally coming to his knowledge as widely known as possible.

What is to be done about the "dead beat?" "Experience is a dear teacher and he is a fool who will not profit by it." In all cities of any considerable size there are credit associations, the members of which make regular reports to each other of their experience with those with whom they have had dealings. He who has swindled one member of the association is quickly known to them all, and all are thus placed on their guard.

That is a measure which could profitably be adopted by the physicians. They should have their "credit associations," with regular bulletins of the beats and those who make it a rule not to pay their physicians' bills until

forced to do so. And these bulletins should be kept as complete as possible. The blacklist is not too harsh a measure to be directed against that class of patients, and is a protection to the physician having access to it. Such a blacklist should be under the direct control of the medical profession.

Comment, criticism or suggestions as to feasibility or matters of detail are cordially solicited.

MEDICAL INSPECTION OF PUBLIC SCHOOLS.

After years of persistent and forcible arguments from prominent sanitar-ians, the health boards of the large municipal corporations have awakened to the fact that one of the greatest etiological factors of disease has been overlooked in the school and public buildings.

In the Eastern cities physicians have been appointed as medical inspectors to visit the schools, thus impressing the teachers with the necessary importance of free ventilation and other features of much-neglected sanitary regulations.

Boston has not only a well-equipped corps of medical inspectors for its schools, but has added to its department of public instructions several well-qualified lecturers on the "Essentials of Practical Hygiene and Sanitation," thus trusting that the pupils may be able to put into practice the information which they receive in this most necessary branch of learning.

A representative of the Journal has visited during the past month many of the public schools in Denver, thus acquainting himself with the need of medical inspection for these schools. In nearly every class room entered the atmosphere was close, and in some distinctly obnoxious; rarely did any room

have sufficient ventilation. In one school building of four rooms, which contained on an average 40 pupils, the windows were tightly shut, the heating apparatus in full working order, and the outside temperature registering between 60° and 70° F. In this same school the janitor swept up the floor without previously sprinkling it with water or scattering wet sawdust, which is customary in all public buildings. In this way the air space proved a good medium for dissemination of dust which contained probably much germinal infection. While in the midst of this sweeping the scholars were dismissed and were obliged to pass through this dust-laden hallway to gain exit from the building.

In other schools two cases of ring-worm were recognized, still the little patients were allowed to associate with their classmates regardless of exposure to infection.

That the need of medical inspection is imperative for the furthering of instruction, the case cited below will unquestionably prove.

In a class in one of the primary schools the pupils were asked to recite a verse which had previously been taught to them by their teacher. Each child in turn came to the front of the room and repeated the respective selection. One little girl, in place of giving enunciation to her lines, simply performed mechanical movements of the mouth. When told by the teacher to recite aloud, she replied that she had heard nothing and thought the exercise consisted wholly in imitating the attitudes and actions of her classmates.

This incident does not reflect discredit in any possible way upon the instructor of this child, as until then she had never been aware of the pupil's

defective hearing. Not only should the hearing of each child be tested, but more important is the examination of the sight for myopia, astigmatism and color blindness.

In the Denver schools much valuable time is apportioned for teaching the elements of botany, astronomy and similar studies of a limited value in this practical every-day life, yet the subject of hygiene is left comparatively untouched, save when referred to in the short talks given on physiology.

The Health Commissioner of Denver recognizes the importance of medical inspection of the schools, but owing to a lack of sufficient appropriation, is unable to carry out the necessary work in this neglected line of public health supervision. A potent drawback is the existence of several school districts within the city limits of Denver which are not under one municipal superintendency, and the commissioner can not gain the required support from the several district superintendents, as each district fancies it is being subjected to an unfair test in having its schools inspected.

If each school district would appoint a physician whose duty it would be to lecture at given hours on hygiene, and daily inspect the schools under his supervision, carefully carrying out the quarantine laws imposed on infectious diseases by the health commissioner, Denver would possess an ideal system of school inspection.

Apart from this medical inspection, the teachers at their weekly meetings should receive instruction from some competent lecturer on sanitation, in order that they may be better prepared to demonstrate to their students, on such opportune occasions as may present themselves, the practical value of the teaching they have received.

The Denver Clinical Society.

This report appears in no other medical journal.

Meeting of March 6, 1900.

The Denver Clinical Society met at 324 McPhee building at 8 p. m., Dr. Guthrie presiding. Members present: Drs. Bates, Gale, Goodman, Mitchel, Kapp, Root. Drs. Connelly, Chandler and Miss Stewart, guests. The minutes of the last meeting were read and approved. The medical program was furnished by Dr. Bates, "Post Partum Gynaecological Treatment." Dr. Bates spoke particularly of repair of cervical lacerations. Discussion opened by Dr. Goodman. A general discussion followed, closed by Dr. Bates.

The society adjourned to meet March 20, 1900.

Meeting of March 20.

The Denver Clinical Society met at the usual hour and was called to order by the president. There were present Drs. Guthrie, Bates, Mitchel, Gale, Tiel, Root, Kapp, and Drs. Chandler, Connelly and Miss Stewart as guests. The medical program was filled by Dr. Kapp; paper, "Preventive Therapeutics." Discussion opened by Dr. Bates, General discussion by all the members present, closed by Dr. Kapp. Dr. Mitchel reported the circulating library well under way and proving very satisfactory.

The society then adjourned to meet April 3.

JULIA SEATON KAPP, Secretary.

Pueblo County Medical Society.

This report appears in no other medical journal.

Meeting of February 6, 1900.

"Bulbar Paralysis." Dr. Hubert Work presented a man, 51 years of age, miner by occupation, who developed in May, 1899, the first symptoms of progressive bulbar palsy. Family history negative. Had diphtheria when a child and typhoid fever three years ago, but, aside from those two illnesses, has always enjoyed good health prior to last May. Reflexes normal, mental condition normal.

On May 28, 1899, he first noticed difficulty in pronunciation of words, and pain in larynx. From that time the symptoms have been those common to bulbar palsy. In August had some large hypertrophies removed from

nasal passages. No improvement followed the operation.

At present time there is difficulty in swallowing and pronunciation; lips and tongue have become atrophied; constant flow of saliva from mouth, and all the symptoms of a typical case of bulbar paralysis. Exposure supposed to have been the cause of the disease.

Paper of the evening by Dr. H. F. Hazlett; subject, "A Study of Some Diseases Other than Pulmonary Phthisis Which Are Cured or Influenced Favorably by a Residence in Southern Colorado."*

* This paper will appear in an early number of the Journal.

Meeting of February 20, 1900.

"Congenital Benign Tumor in an Infant." Dr. J. J. Pattee presented, through the kindness of Dr. Dorland, whose patient it was, a child five months of age, who at birth had a tumor centrally located over the lower sacral vertebrae, at which time there was some question as to its being a spina bifida, owing to its location and the fact that palpation revealed a sense of hardness on either side, imitating that of the margins of imperfectly united laminae of vertebra.

At the present time the tumor is relatively smaller than at birth, being now about the size of half an ordinary orange. It is even, movable beneath the skin, and on palpation a sense of bony portions in the contents is revealed. On pressure it does not recede, as spina bifida sometimes does, nor does pressure produce increase of tension in the fontanelles.

The tumor is a thyroid dermoid. The removal of these hard forms of dermoid located about the rectal region is, as a rule, more difficult than the ordinary removal of dermoids, on account of the free blood supply and the fact that bowel is sometimes adherent.

Special paper of the evening by Dr. Carroll E. Edson, of Denver; subject, "Pulmonary Complications of Typhoid Fever."*

Discussed by Drs. Stoddard, Rice, Pattee, Cambell, Baker, Black, Dorland, Bulette.

Meeting of March 6, 1900.

Meeting was called to order at 8:30 p. m., Vice President Work presiding.

On motion the reading of the minutes of the previous meeting was dispensed with. The Committee on Resolutions presented the following resolu-

tions in memory of Dr. Harry F. Hazlett, who died at his home in this city on Sunday, March 4, 1900:

"In Memoriam.

"Inasmuch as one of our members, Dr. Harry F. Hazlett, has answered his last call, 'not to minister but to be ministered unto,' we, his colleagues in the Pueblo County Medical Society, desire to express our pleasure in having known him socially, and our appreciation of his professional purity and personal integrity; therefore be it

"Resolved, That in the death of Dr. Hazlett, who was for five years a member of this society, a part of this period one of its trusted officers, we have lost a member who commanded the respect of every associate—one who wore without a stain the robe of professional purity, a physician who never prostituted the confidence placed in him as a trusted adviser or commercialized opportunities which are inevitably associated with sickness and distress, but, obedient to the example of the Great Physician, promptly heeded the importunities of the poor also.

"Resolved, That the standard of medical practice has been elevated by his influence in this society and city, and that we have lost an associate who was ethical, upright, and at all times a trustworthy counsellor, incapable of betraying a professional confidence or of depreciating the fair name of a brother practitioner.

"Resolved, That these resolutions be published in the daily press of the city and The Colorado Medical Journal, spread upon the minutes of this society, and a signed copy presented to the wife of the deceased."

As a further token of respect to the memory of the deceased, the society adjourned at 8:45 p. m.

H. A. BLACK, M. D.

* Published on page 125.

Bulletin of the Colorado Medical Library Association.

Devoted to the interests of Medical Libraries in the West.

HENRY SEWALL, M. D., President.

LAURA LIEBHARDT, M. D., Treasurer.

CARROLL EDSON, M. D., Secretary.

CHAS. R. DUDLEY, Librarian.

No. 19.

APRIL, 1900.

The Colorado Medical Library Association has almost nothing to say for itself this month. About thirty more volumes of journals have just been returned from the bindery and will soon be on the shelves.

The set of books given by Dr. John Boyce some time ago will be accessioned shortly. Some of them are, without doubt, valuable additions to the library.

In looking over some incomplete files of medical journals, which really ought to be bound immediately, I find one or two numbers missing, and in journals, too, that have never before been diffi-

cult to keep track of. It has set me to wondering if some of the brethren—without, of course, evil intent or malice aforethought—have not carried off, in the spacious pockets of great coats, some of these above mentioned missing journals. I realize, of course, that this is rank heresy, and that no one but a heretic would dream of hunting for stray and missing medical magazines within the sacred precincts of a doctor's office, and, in self-defense, I will say what I mentioned before—that I am only wondering, nothing more.

ZOE GUERNSEY.

Denver and Arapahoe Medical Society Meetings.

This report appears in no other medical journal.

A regular meeting of the Denver and Arapahoe Medical Society was held at the Brown Palace hotel, March 27, 1900, the president, Dr. Fleming, in the chair. The minutes of the previous meeting were read and the following program was then carried out:

1. Address on "Neuresthenia," by Dr. J. T. Eskridge.
2. Address on "Seborrhoea," by Dr. J. M. Blaine.
3. Paper, "The Prevention of Diseases of the Eye During Childhood,"* by Dr. E. M. Stevens.

* Published on page 138.

Discussion.

Dr. Jackson: It is manifestly impossible to cover all the subjects of interest in the discussion of such a paper as this one is. I shall therefore confine my attention to two or three points. Special stress has been laid on the proportion of blindness occurring before the age of twenty. That is by no means the majority of the cases of blindness for which preventive measures should be used in childhood. The increase in myopia in the schools of Philadelphia, from 4 per cent. in the grade schools to 20 per cent. in the nor-

mal schools, means that an enormous percentage of children become myopic in the schools. A large proportion of the cases of blindness occurring after middle life is due to myopia. This is preventible in childhood, and not later. The distension of the eyeball goes on under pressure of the external muscles, which is enormously increased by the necessity of near work, and this is almost always progressive unless corrected. In nine cases out of ten, when it is corrected, there is no increase in the myopia. The choroidal changes threatening blindness are checked by the correction.

The first point in the correction is the calling attention to the evil. The remedy lies in examination during school life.

As regards the prevention of squint or fixed squint, as long as our treatment was by operation, early efficient treatment was impossible. Now that we have objective means for the accurate measurement of the lesion, the whole question of treatment is changed. At the International Ophthalmological Congress last summer, Priestly Smith reported 400 or more cases treated, the youngest under 1½ years, all under 4. They were treated with glasses, and almost all cured. If the glasses are thrown aside after the binocular vision is fixed, the cure remains permanent. He also operated on a series, with better results than in late operations.

Dr. Black: I wish to say a word in reference to the feeding in connection with the development of eye diseases. We see a large number of children with phlyctenular keratitis, and they have almost always been badly fed. The result is a deterioration of the whole physical condition, and the eye

probably suffers no more than the other parts of the body. These conditions are impossible of cure unless the treatment is fortified by the proper diet, usually milk. The mothers complain that the children will not drink milk. The trouble generally lies with the mother, and it is usually very difficult to get coöperation on their part.

Dr. Eskridge: We should emphasize the early age at which strabismus can be corrected, and the fact that when it is not corrected before the sixth to the tenth year, vision never becomes perfect. Ophthalmologists should impress upon the physicians that it is the duty of every practitioner to refer such cases to the oculist early, and not wait.

Dr. Chase: I have been struck by Dr. Stevens' statistics. It seems to me that the census figures can hardly be very valuable, that there must be a much larger number of the blind than they call for.

I should be inclined to regard the schoolboy's "beanie" as even more destructive to the sight than is the Fourth of July fire-cracker. The importance of Dr. Eskridge's remark as to the duty of educating the general practitioner to referring cases early to the oculist struck me very forcibly, but oculists frequently get tired of combating the fallacious opinions of general practitioners.

I believe that it is as necessary and wise to look after the condition of the eyes of school children as vaccination.

Dr. W. N. Beggs exhibited three larvae occurring in the vomit and feces of a child.

Dr. Bennett exhibited a gourd stem used by natives of West Africa in giving enemata.

Dr. G. Stover requested information regarding delinquent members.

Moved by Dr. Eskridge, seconded by Dr. Tyler and carried, that names of delinquent members be read according to constitution.

Dr. Jackson moved that a committee be appointed by the chair to consider

the advisability and feasibility of testing the eyesight of children of the public schools. This motion was seconded by Dr. Chase and carried.

There being no further business, the society adjourned.

The Denver Clinical and Pathological Society.

This report appears in no other medical journal.

The Denver Clinical and Pathological Society met March 9, at 8 p. m., in the office of Dr. R. F. LeMond, being entertained by Drs. Munn, Gallaher, LeMond and Higgins. Present, thirty-one members and three guests, Drs. Libby, Brechemin and Smith.

The minutes of the previous meeting were read and approved.

Dr. Levy exhibited a middle turbinated bone greatly deformed by pressure of polypoid tissue; also a nasal angioma growing from floor of fossa, both removed by galvano cautery. Hemorrhage prevented by supra renal extract. Discussed by Drs. Black, Loringier, L. Freeman and Gallaher.

Dr. Wetherill exhibited a myoma of anterior vaginal wall, encircling the urethra.

Dr. Brechemin reported cases of hic-cough from various diseases. Discussed by Drs. Hershey, Stover and Kleiner.

Dr. Black reported recurrence of the growth in his palate case, recently reported. Discussed by Drs. Gallaher and Freeman.

Dr. L. Freeman made a further report of the use of angiotribe in the radical cure of varicocele. Discussed by Dr. Hershey.

Dr. LeMond reported removal of cataract following scarlatina in a girl of 17, blind for eleven years; perception of light now being present. Intra-ocular vision being low, the injection of rabbit vitreous is thought of. Discussed by Drs. Black and Libby.

Dr. Whitney reported (1) case of cancer of liver, followed by universal carcinomatous growths; (2) primary cancer of pleura; (3) a case of pleurisy with effusion, pericarditis with effusion, and endocarditis; both collections of fluid were aspirated.

Dr. Hill spoke of urinary analysis in which excess of uric acid was found associated with albumenuria.

Dr. Stover reported a family of leucodermics.

Dr. Blaine reported a case of progressive leucoderma.

Adjourned.

G. H. STOVER, M. D.,
Secretary Pro Tempore.

Reprints received this month from Drs. I. B. Perkins and T. H. Hawkins of Denver, D. S. Booth of St. Louis, and Geo. M. Edebohls, L. Duncan Bulkley and Chas. H. May of New York City.

COLLEGE NOTES.

GROSS MEDICAL COLLEGE.

By I. FRIESNER.

In lecturing to the class on acute tonsillitis, Dr. Levy gave them a gargle, which is both very old and very efficient—a rather rare combination in medicine. The gargle is first mentioned by Sorbenheim, in his work on *Materia Medica*, published almost a hundred years ago. He called it "Aqua Binelli." Dr. Elsner's father, Dr. Levy's grandfather, used it, with good results, in his practice over fifty years ago. Since that time every member of the family has used it, more or less, modifying it and changing the quantities of the constituents.

The formula which Dr. Levy now prescribes is the following:

Olei Creosot.....gtt viij
Tr. Myrrhae.....
Glycerini aa ʒi
Aquae q. s. ad.....ʒviiij

A curious incident in the history of this gargle is the fact that the New York Medical Record once copied it from a Paris laryngological journal—"and thereby hangs a tale." It was reported in the school notes of the Gross Medical College Bulletin, a publication conducted a few years ago by the faculty and students of the G. M. C. From this journal it was copied in a Vienna laryngological journal, thence into an English journal, then into the French Journal, from which the Record finally copied it. So that the wisdom, culled from a foreign journal, actually had its birth in print in Denver, and at the college.

Dr. Tyler has recently introduced the new "case" method of teaching systematic medicine, outlined by W. B. Cannon, A. M. (Boston Medical and Surgical Journal, January 11, 1900.) This method is to be used as a supplement to the text book quizzes, and also as a means of review. The system is, in brief, to give the students data from actual case histories. The students, after having studied the case, come to a conference with the instructor, at which the case is discussed in all its aspects. The advantages of such a system are both manifold and obvious. It is almost exactly the kind of thought and work the young physician will be called upon to do when he gets into actual practice.

In the present system of teaching medicine, whether it be the didactic lectures or recitations, the student is required to rapidly mention lists of the pathological changes, symptoms, various methods of treatment, etc. He learns these as merely disconnected facts, without their relationships, and if he has no occasion to refer to them, frequently forgets them, even more rapidly than he acquired them.

In the new system, he acquires a clinical picture, associated with certain morbid changes and symptoms.

Not the least important advantage lies in the fact that the student is trained to take a careful history, and is taught what to look for in making a

physical examination. Some one has said: "The eye sees only what it brings the power to see." In order to appreciate certain things, we must be taught to look for them. It often surprises the student to hear young, well-trained physicians regret the opportunities for clinical study, which they did not appreciate while serving as interns at various hospitals. The cause lies not in the fact that they did not work hard,

but they were not trained what to search for.

From the student's point of view, the new system will prove far more interesting than the old methods. Since patients are not available, in sufficient numbers, for classes, this abstract practice of medicine forms a valuable substitute. We have no doubt that it will prove more than satisfactory both to the instructor and to the students.

THE DENVER MEDICAL COLLEGE.

By ALLISON DRAKE, PH. D.

The Denver Medical College closes its scholastic year with the month of April. The year has been a profitable one in many ways. The classes have been of average size and of more than average ability. Several students, of superior intelligence and training, entered at the beginning of the year to advanced standing, coming from the University of Iowa, Yale University, the University of Chicago, and other institutions of good repute. The faculty have given excellent instruction, and have, with few exceptions, attended regularly, faithfully and intelligently to the duties which they individually, as members of the faculty, pledge themselves to perform.

The clinical lectures have been a new, interesting and profitable feature of the advantages open to the senior and the junior classes. Professors Wetherill and Jayne, of the department of gynaecology; Professor Pershing, of the chair of nervous and mental diseases; Professor Packard, of the chair of orthopaedic surgery, and Dr. Bane, of the department of ophthalmology, have been preëminently faithful to

their engagements and instructive in their demonstrations.

The junior class experienced at the beginning of the year a scarcely repairable loss in the resignation of Professor Johnston from the chair of clinical microscopy. It is not easy, on the spur of the moment, to find a duplicate of Professor Johnston's abilities as a microscopist and as a demonstrator of what the microscope reveals. The consequence was that the instruction in clinical microscopy was in abeyance for many weeks.

During the last two months some interesting repairing has been in progress in the college building. The partition between the attic and the hall running to it has disappeared. This is important and far-reaching, and vital results must sooner or later follow. This part of the building is a sort of sanctum sanctorum for some, and one of the students, a gray and burly fellow, full of the spirit that rushes in where angels, etc., recklessly rushed into the hall, to his facial disfigurement. Strange to say, the beauty and symmetry of the

hall escaped unscathed. The luckless student is having prepared, for the benefit of his fellows, a sign, that he will post conspicuously in the proper place. The sign reads: "Cave Canem!"

Unfortunately, it is probable that there will be no senior class in the college the coming year. Professor Edson, in his closing remarks to the juniors taking his course (and all the juniors took it and took it hard), said: "Do not think that with pen and paper you can answer in the examination any of the questions to my full satisfaction. You must answer them with your lives!" This ruthless sacrifice of hu-

man life will result in great loss, not only to the college, but to the medical profession, not to say to the world at large; for the junior class is a large one and contains many promising intellects. Moreover, Professor Edson has planted in the fertility of the junior mind many rare and precious seeds, that, under favoring conditions, can not but yield some thirty, some sixty, and some an hundred fold. It is to be hoped that ere the day of junior doom, which is the 18th. of April current, some one or something may arise to soften, yea, to gelatinate, the "grim visage of Moloch!"

FROM OUR EXCHANGES.

The Skin in Paralysis Agitans.

Dr. R. Reuling, of Johns Hopkins Hospital, contributes, in the Maryland Medical Journal, an interesting monograph on the "Skin in Paralysis Agitans." After reviewing the recent pathological data on this subject, he cites the following clinically diagnostic points:

"In this connection it may be well to speak of the so-called frontalis symptom, described in 1898 by Motschutkowski, and which this observer claims is found in the great majority of cases of paralysis agitans, and therefore of diagnostic importance, especially in cases showing a typical tremor, or in those cases which present no tremor whatever (paralysis agitans sine agitane). This frontal symptom consists in the fact that the folds of the skin of the frontal region, formed during contraction of the frontalis muscle, remain as deep folds for some time after this muscle has been

relaxed. It is best brought out by getting the person examined to look upwards for one or two minutes, and then look downwards, when the deep wrinkles in the forehead will persist, and slowly disappear in three or four minutes. This symptom was originally attributed to changes in the elasticity of the muscle, but Frenkel believes it is due to the thickening of the skin. He also attributes the expressionless facies of paralysis agitans to these skin changes, especially to the loss of elasticity, interfering with the movements of muscles employed in facial mimicry. As to the character of the changes themselves, Frenkel describes them about as follows:

"There is a well-marked palpable thickening of the skin, which, as a rule, has an irregular distribution. Frequently the skin covering an entire extremity will be found thickened, while the corresponding member of the opposite side will be normal in this respect, or show only a slight change.

With this more diffuse thickening there are, as a rule, smaller areas where a more marked circumscribed thickening is felt. What is very striking is the adherence of the skin to the subcutaneous tissues, so that it may be impossible to squeeze it into folds in regions of the body where this is readily done in the normal state. The most marked change is seen on the forehead, though the skin of the extremities allows a better comparison to be made between the two sides of the body. The general appearance of the thickened skin hardly differs from the normal, so that only by careful palpation and comparison of folds of skin over symmetrically-situated regions can the difference be detected. This procedure will also show the loss of elasticity in different regions, and the adherence of the skin to the sub-cutaneous tissues.'"

Frenkel believes that the neuralgic pains and various paresthesias met with in this disease, and especially located in the extremities, can be best explained by these changes in the skin.



The New Proctology. In the Pennsylvania Medical Journal Dr. W. M. Beach, A. M., of

Pittsburg, says:

"The rectal specialist is something more than a pile doctor. Many of the ills of the body have their origin in chronic constipation and diarrhoea, which cause medical men to grow bald and gray in their efforts to eradicate; but it has remained for the new proctology to demonstrate clearly that, in many cases at least, constipation or chronic diarrhoea depends upon an hypertrophied mucosa of the upper rec-

tum or sigmoid flexure. A normal anus and fixed rectum may be found in these cases, but an inspection higher up will reveal an injected mucosa and so-called rectal valves, which may occlude the lumen and become obstructive to the descent of the fecal column, or generate a mucorrhoea or chronic diarrhoea with their usual train of symptoms. In this connection it is well to make a distinction between constipation and obstipation. Etymologically constipation means crowding together, while obstipation means crowding against. Constipation is delayed expulsion of feces, owing to prolonged residence in the upper portions of the bowel; obstipation is difficult expulsion of the feces, owing to strictures obstructive to their descent. Hypertrophied rectal valves are obstructive to defecation, hence obstipation and straining at stool. This pathology is new, and its discovery and elucidation are due to the efforts and ingenuity of Dr. Martin, of Cleveland. The reflexes dependent upon constipation and chronic diarrhoea are well known as sacral distress, the dyspepsias, headache, migrating pains over the body, nervousness and the usual accompaniment of the auto-intoxications, etc."



Acute Otitis Media and Measles and Scarlet Fever. Dr. Charles H. May discusses, in Gaillard's Medical Journal, acute inflammation of the middle ear, complicating scarlet fever and measles.

"The otitis is very frequently bilateral, but at a given time the two sides will usually present different stages of progress; the second ear is apt to become involved one or more days after the commencement of the symptoms in the first. The records of the Willard

Parker Hospital show that out of ninety-six cases, thirty were bilateral; forty affected the left ear, and twenty-six the right ear.

"The advent of the aural complication is commonly announced by a rise of temperature, averaging 102° or 103° , sometimes higher, and the attendant symptoms of fever—rapid pulse, constipation, headache, restlessness, anorexia and thirst; occasionally there is repeated vomiting, delirium, and sometimes convulsions; in older children there may be chills or chilly feeling.

"In the early stages of many of the cases, however, it will be absolutely impossible to say whether the otitis is going to assume the catarrhal or the purulent form; whether it will be mild or severe. Fortunately, as far as treatment is concerned, it is unnecessary to arrive at any definite conclusion in this direction.

"Local abstraction is indicated and often relieves. This is accomplished by two leeches placed upon the region immediately in front of the tragus; or the artificial leech, either that of Heurteloupe or the scarificator and cup of Bacon may be applied in this situation, and about an ounce of blood abstracted.

"A great deal has been written in favor of and against inflation in the early stage of middle-ear inflammation. The writer is an advocate of inflation, preferably by means of the catheter; but when this is impossible, by the Politzer method. He has never seen any harm result from this procedure, and it is certainly productive of favorable action in a number of cases. *But it must be used properly.* The nose and throat must receive a thorough preliminary cleansing and inflation must be practiced very gently.

It is difficult to pass the catheter in a child, but it can be done with care and patience, and the plan certainly has advantages over inflation by the Politzer method.

"Combined with inflation, the writer is in the habit of employing suction of the tube and tympanum. This addition seems so simple that he hesitates to claim any originality for the method; yet he has never seen it described nor heard of its being used by others. It has given excellent results in this stage of otitis.

"*Suction of the tube and tympanum* consists in the employment of a current of air in the reverse direction to that used in inflation. After the catheter has been introduced and the middle ear inflated, the finger is placed upon the valve of the bag while in a compressed condition. The elasticity of the rubber tends to cause the bag to assume its original shape, and since no air can enter through the valve, a suction force is generated. If the finger be kept on the valve constantly no progress is made, since the suction causes the walls of the tube to collapse. But by allowing a little air to enter the bag by releasing the finger for a moment, again applying the finger, and continuing this alternately, the contents of the tube and tympanum tend to be drawn toward the catheter. Even when the catheter can not be inserted, suction may still be used, following inflation with the Politzer method."

♦♦

**Ethyl Chloride
in
General Anesthesia.**

Dr. Jas. P. Tuttle, of New York City, relates in the *Journal of the American Medical Association* experiences with ethyl chloride in general anesthesia.

"For many years ethyl chloride has been known as a local anesthetic, and to some few as having properties of a general one through inhalation. Its use has never been very general, however, and information concerning it has been very meagre until recently. Almost all physicians have used the drug as a local anesthetic, some more and some less extensively. In this matter it has never compared with cocaine, and can never supersede that drug. I do not propose to go into the literature of kelene anesthesia, but during the discussion of general anesthesia, it might be well to make public some experiments I have been making for the past three months with ethyl chloride as an adjuvant to ether anesthesia.

"After reading the report of Army Surgeon Weisner, in November last, I determined to give kelene a trial as a general anesthetic. Accordingly, having obtained a graduated tube, with a proper sized aperture for general anesthesia, I made my first experiment on November 15. My patient was a strong, well-developed man of forty-five, suffering from a fatty tumor under the border of the scapula. The kelene was administered and insensibility to pain produced in four minutes. The muscles, however, did not relax to give me easy access to the tumor, and as I had no encouragement to suppose they would so relax, from the experiences of Hecker, Weisner and others, I ordered my anesthetist to change from kelene to ether. In less time than it takes to tell it, my patient was entirely under the influence of ether and the muscles entirely relaxed. Indeed, so rapid was the effect at first produced that I was alarmed; but as there were no symptoms to justify alarm, I

went on with my operation. The result in this case was so happy that I determined to try it on my next patient, one with hemorrhoids. In such cases kelene would not prove a satisfactory anesthetic, because it does not relax the muscles, and here this relaxation is absolutely necessary. Therefore I administered the kelene for three and a half minutes, or until the patient was insensible to touch of his conjunctiva or to the pricking of a hypodermic needle. The Ormsby ether inhaler was then applied and in two minutes by the watch our patient was completely anesthetized and relaxed, making in all five and a half minutes for the complete anesthesia.

"So pleased was I with the results in these two cases that I began a series of experiments with the drug as an adjuvant of ether anesthesia. The method employed was as follows: A graduated tube of pure ethyl chloride, with a larger aperture than that ordinarily used for local anesthesia, was employed. An Esmarch chloroform inhaler, covered with several layers of gauze, was placed over the patient's nose and mouth; the kelene was then sprayed on its under surface and the patient directed to inhale deeply. The spraying was renewed whenever the vapor ceased to appear on the patient's exhalation. As soon as the patient became insensible to the prick of a needle or the touch of his conjunctiva, the Ormsby ether inhaler was applied and the anesthesia completed."

♦♦

Report of a case
of gastrostomy, by
Gastrostomy. Nelson Dewey
Brayton, M. D.,

cited in the Indiana Medical Journal:

"The patient, a male, aged sixty-five, was operated on for carcinoma of the

oesophagus, the Witzel method being employed. The length of the incision was about three inches.

"On the second day after the operation the patient developed some congestion of the lungs; his temperature rose to $101\frac{1}{2}$ and he suffered from an incessant cough. Otherwise he appeared very well. The semi-sitting posture was immediately resorted to and quick relief followed.

"On the third day after the operation the patient was allowed to get up out of bed and walk around the ward somewhat. Most of the day was spent in a rocking-chair.

"On the fourth day after operation the patient was driven in a cab, in company with the writer, to the building of the Academy of Medicine, where he was presented to the members of the academy by Dr. Torek and his case commented on. In speaking of the case, Dr. Torek said that the superincumbent weight of the contents of the abdominal cavity did not fall directly upon the wound as in the more common lapartomy cases, and the force of intra-abdominal pressure was therefore very much reduced, which permitted the patient to leave his bed at such an early date."

♦♦

Treatment of Tuberculosis by Cinnamic Acid Prof. Landerer, of Stuttgart, has published a work on methods and treatment of tuberculosis by cinnamic acid, citing some 240 cases, in which he has used his formula.

He believes that cinnamic acid produces an intense phagocytosis, causes a sclerotic condition of the tissues in the neighborhood of the morbid process, thereby circumscribing the growth; it

also exercises a germicidal influence upon the bacillus.

The cinnamate is a white crystal powder, soluble in hot water 1 to 20. It is employed in the form of a solution or emulsion, the strength varying from 1 to 15 per cent., the reaction being neutral or strongly alkaline.

The solution to be boiled and filtered before using.

R

Finely powdered cinnamic acid, gro.

Oil of sweet almonds, 150 m.

Yolk of egg, 1 m.

Saline solution, 7 per 1,000. A sufficient quantity to make $3\frac{1}{2}$ oz.

The preparation is injected every two to four days, in doses 1-60 gr. to 1-30, minimum, and 1-3 gr. maximum.

—Journal des Practicines.

♦♦

Shotgun Prescriptions.

Dr. Albert Abrams in the American Therapist cites the following "shotgun prescription" given for a cough, by a physician who claims to have a large and lucrative practice. It is evident that the doctor in question believes in the law of similar equations:

R Syrup scillae Comp.
Syrup senegae.
Syrup glycyrrhizae.
Syrup prun virgin.
Syrup balsam tolu.
Syrup morphiae.
Syrup ipecac.
Syrup limoni.
Tinct. opii camph.
Tinct. sanguinariae.
Tinct. cubebae.
Vin. autimon.
Spir. aeth. nitras.
Mel a a $\frac{3}{4}$ s s.
Pulv. chlor potass.

Pulv. mur ammon.
 Pulv. carb ammon. a a 5i.
 M. S. A dessert spoonful q 3 hours.
 Professional occupation neuroses
 continue to multiply—the cigarette

roller, the weaver, the milkmaid, the
 telegraph operator, all pay tribute to
 muscular insanity. The polypharma-
 cist will soon be added to the list.

NEWS ITEMS.

April 9, 1900.

To the Editor of the Colorado Medical
 Journal:

Sir—At the last meeting of the Colo-
 rado State Medical Society, a commit-
 tee consisting of Drs. W. A. Jayne, W.
 B. Fenn, L. Freeman, E. Jackson and
 the undersigned, was appointed to con-
 sider the advisability of the establish-
 ment of a laboratory for pathological
 work, this laboratory to be located in
 Denver. This committee is without
 power to act, but it is desirous of mak-
 ing as full a report as possible at the
 next meeting of the society, and to this
 end would request from members of
 the society such suggestions as may oc-
 cur to them. I know of no better way
 of bringing this before the profession
 than through the columns of your jour-
 nal. Very sincerely yours,

CHARLES A. POWERS, M. D.

The White Oaks route has arranged
 to establish its hospital in Alamo-
 gordo, N. M., and it will be ready for
 patients May 1. The employes of the
 route receiving less than \$60 a month
 will be assessed 50 cents; those receiv-
 ing less than \$90, 75 cents, and those
 receiving over \$90, \$1 per month, in
 return for which they will be entitled
 to medical and surgical attention of all
 kinds and medicine when needed.

According to Weather Observer
 Brandenburg the months of April for
 twenty-seven years show the follow-

ing average conditions: Normal tem-
 perature, 48; warmest month, in 1881,
 average 54 degrees; coldest, 1873, av-
 erage 41 degrees; highest temperature
 on 30th, in 1874, 83 degrees; lowest
 temperature on 2d, in 1876, 4 degrees;
 average precipitation, 1.90 inches;
 greatest precipitation in 1885, 4.94
 inches; least precipitation in 1878, .05
 inch; average number of clear days, 10;
 partly cloudy, 13; cloudy, 7.

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POPULATION OF STATE HOMES.

Soldiers' and Sailors' home, at Monte
 Vista—Inmates on March 1, 149; re-
 ceived 14, discharged 19, leaving 144
 at present.

Penitentiary at Canon City—March
 1, 529; admitted 11, discharged 14,
 leaving 526.

Reformatory at Buena Vista—March
 1, 102; admitted 13, discharged 6, leav-
 ing 105.

Industrial School at Golden—March
 1, 159; admitted 11, discharged 6, leav-
 ing 164.

Insane Asylum at Pueblo—March 1,
 492; admitted 11, discharged 8, leaving
 495.

Industrial Home for Girls at Aurora
 —March 1, 42; admitted 2, making 44.

School for Deaf and Blind at Colo-
 rado Springs—March 1, 121; admitted
 3, discharged 1, leaving 123.

Home for Dependent Children at
 Denver—Inmates March 1, 75; admit-
 ted 4, discharged 2, leaving 77.

A new and what promises to be a very useful organization is the club for trained nurses formed quite recently. Its object is to provide professional lectures for the nurses, literary and social meetings, and a mutual benefit fund for the care of sick members. All nurses holding diplomas are eligible. Dr. Alicia Jeffrey was elected president at the preliminary meeting.

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STATE HEALTH.

Following are the number of cases of contagious diseases in the state for the month ending March 24, as reported by the state board of health: Scarlet fever—Denver 56, Pueblo 10, Colorado Springs 6, Grand Junction 4. Measles—Denver 180, Pueblo 8. Diphtheria—Denver 13, Trinidad 4, Pueblo 4.

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THEIR NEW CHARITY.

The Visiting Nurses' association, the outgrowth of the old flower mission, is fairly started and within the coming month two nurses will be in the field. Officers and directors have been elected as follows:

President, Mrs. Fred Butler; first vice-president, Mrs. E. P. Hershey; second vice-president, Mrs. George P. Atmore; secretary, Dr. Alicia Jeffrey; treasurer, Mrs. Thomas Keeley. These, with the following, compose the executive board: Mesdames C. S. Thomas, James D. Whitmore, C. D. Beaman, Alfred Bacon, W. A. L. Cooper, W. H. Green, O. S. Stores, J. D. Ward, Dr. Conley, Misses Lina Kountze, Hattie Steele, Mary Schermerhorn and Genevieve Ghost. The association has now thirty associate members and it wants 500.

The residence of Mrs. J. D. Ward at Nineteenth and Grant avenues, is to be

headquarters for the nurses' supplies, and Dr. Conley is to be chairman of the visiting nurses. Miss Genevieve Ghost will be chairman of the flower mission branch of the work.

Meetings of the directors will be held the second Wednesday morning of each month at the Y. M. C. A.

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THE CHRISTIAN SCIENTISTS MISS AN OPPORTUNITY.

Just across from Pittsburg, in Washington county, lives Mrs. Annie Mathers, who has been speechless for several years. Her condition was caused by illness. She opened a closet Wednesday and came upon a mouse suddenly, and slammed the door and screamed. She was amazed to find the impediment that had prevented her from speaking was removed by the fright and that her voice was the same as before her illness.

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MARCH HEALTH STATISTICS FOR DENVER.

The deaths numbered 195, of which 116 were males and 79 females. There were 216 births, 124 of which were males and 92 females. The percentage of deaths per thousand, exclusive of the tuberculosis cases, was 11.52, compared with 8.74 for February, and 11.43 for March, 1899.

There were 62 cases of scarlet fever reported and 2 deaths from this cause, 19 cases of diphtheria and 3 deaths, 145 cases of measles, no deaths; 3 cases of typhoid, no deaths; 12 cases of whooping cough, 4 deaths, and 6 cases of smallpox, no deaths.

From all sources of tuberculosis there were 39 deaths reported. Of this total, 32 cases were contracted outside of the state, 5 were not classified, and 2 were ascribed to Colorado, but this Dr.

Dulin greatly doubts. In point of number, pneumonia ranks next to consumption in deaths, having 29 to its credit. Bright's disease and apoplexy each claimed 8 victims, and 20 people fell victims to the various troubles of the heart.

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LICENSED UNDERTAKERS.

At the recent examination held by the state board of health the following undertakers were granted licenses to practice in the state: J. C. Schwarz, Glenwood Springs; G. Emery Harris, Boulder; Lucian D. Campbell, Steamboat Springs; Ed L. Harris, Central City.

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THE FAILURE OF D. APPLETON & CO.

J. Hampden Dougherty has been appointed receiver for D. Appleton & Co., publishers, on the application of Daniel Pritchard, a stockholder. The bond of the receiver was fixed at \$150,000. The liabilities are \$1,110,000. The assets consist of stock and outstanding accounts.

A reorganization committee composed of James G. Cannon, D. Juillard, Edmund C. Converse, Warner Van Norsden and Charles Hathaway has been formed and will promptly submit a plan of reorganization.

Mr. Cannon, chairman of the reorganization committee, says he is confident the firm can be liquidated so that there will be no loss to creditors. The firm will go on conducting its business in the same way, only that it will be under the receiver's charge.

On February 1 D. Appleton & Co. gave out a balance sheet to the stockholders that showed a balance of \$3,604,028, including \$190,387 cash on hand. The liabilities were given as

the same as the assets. The balance sheet filed to-day shows the cash on hand about exhausted, while the item of bills receivable has declined from \$1,140,000 to \$1,110,000, owing to an account which went by default, the firm being unable to meet it. A statement has been issued by D. Appleton & Co. They say:

"The present situation is owing not to undue business risk or to trade losses, but merely to the fact that through the extension of our business on the installment contract basis position, which contracts amount to fully \$200,000 now outstanding and in due course collectible, our capital has become inadequate to meet our maturities."

The house of D. Appleton & Co. is one of the oldest of the publishing firms in this country. It began in 1825 in connection with a dry goods business, which the founder, Daniel Appleton, had developed in Boston. The house was first established in 1830. In 1835 William H. Appleton, the eldest son of the founder, opened its London branch.

Other members of the family developed the business and it continued its growth for many years.

The officers of the corporation, as well as the directors, are all members of the Appleton family. William H. Appleton, who had been president of the corporation, died last October at the age of 85.

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Governor Candler, of Georgia, recently vetoed a bill permitting the practice of osteopathy in that state, on the ground that medicine was ably represented by the three licensed schools.

HOMEOPATHIC TROUBLES.

There has been a "ruction" in the Homeopathic Medical college of Denver. At the faculty meeting held March 24, some of the members of the faculty being absent, Drs. E. J. Clark, Walter J. King, Mrs. Lillian Powell and Miss Lydia Cardwell, were voted into the faculty by those present, and the meeting adjourned until April 28. As a result of that action Drs. John W. Harris, O. S. Kehr, C. E. Tenant, Geo. E. Brown, W. A. Burr, C. W. Enos, J. P. Willard and D. A. Strickler handed in their resignations from their respective positions on the faculty, but not from the board of directors, to take effect March 26. The senior class, not being satisfied to have their diplomas signed by only a part of the former faculty, have also taken a hand in the mix-up, and altogether there has been a merry row, the outcome of which is still uncertain. It may mean a new college for Denver.

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THE PLAGUE IN SAN FRANCISCO.

On March 22 President Williamson of the board of health issued the following statement: "There is no use in evading the issue. The Chinese quarter of this city is infected with plague. The Chinese are concealing the cases, and for this reason the board has increased its corps of inspectors. Every nook and cranny in the district will be ferreted out and the whole neighborhood will be drenched with disinfectants. Suspicious cases will be isolated and developments awaited.

"San Francisco is confronted with a serious condition and the citizens must prepare to meet it."

The local papers have endeavored to suppress plague news, and the mayor of the city has telegraphed and written

to various parts of the country denying the presence of the plague in San Francisco.

Professor Douglass and W. Montgomery of the medical department of the University of California, and Professor Ophuls of the Cooper Medical college, who examined the germs taken from one of the victims, concur in the plague diagnosis.

Mexican ports are quarantining against San Francisco.

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DISEASES OF THE PHILIPPINES.

The commission sent out from the Johns Hopkins University to investigate the prevalent diseases of the Philippines has returned and made its report, from which the following is gleaned:

The expedition, before proceeding to Manila, spent a short time in studying various Asiatic diseases in Japan, and in the investigation of the bubonic plague, which was prevailing at Hong Kong.

After arriving at Manila the work was mostly prosecuted in the hospitals. There is situated in the walled city of San Juan de Dios a civil institution, with a capacity of from 250 to 300 beds. On the outskirts of Manila is the San Lazaro, or leper hospital, which contains about 100 lepers. Besides these there are the regular army hospitals.

The prevailing diseases of the natives are affections of the scalp, which are very frequent. Smallpox was formerly permitted to run riot; under Spanish control no precautions being taken to prevent its spread. It has now been nearly stamped out within our military lines. Leprosy is prevalent, and tuberculosis and venereal diseases prevail, but not unduly. Beri-Beri is also a

prevailing malady among the Filipinos, especially in prisons.

The American garrisons are mostly debilitated by camp fevers, dysentery and typhoid. The climate is enervating, but not especially unhealthful.

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FUMIGATION OF PULLMAN CARS.

Health Commissioner Carlin intends to have the board of aldermen adopt a sanitary measure of wide-reaching import, one requiring the Pullman sleepers, compartment and other dormitory cars which enter the city to be fumigated daily with formaldehyde before departure. Consumptives come to Denver daily in sleeping cars, which are occupied the next day by healthy persons on out-going trains. Although the linen is supposed to be changed daily, a careless porter may neglect this, and infection may result. The blankets, mattresses and curtains are never changed. The commissioner hopes that the Pullman company will not object to the movement, which is intended as a measure of protection to the health of its patrons.

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Smallpox has appeared on the Nez Perces Indian reservation in Idaho. The inspector at Spalding, Idaho, under date of April 4, reports that there are four new cases and one death. There are about 1,600 Indians on the reservation. The commissioner of Indian affairs has directed that all necessary steps be taken to prevent the spread of the disease.

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The Denver Elks have spent about \$1,000 in fitting up three rooms in St. Joseph's Hospital for the use of sick members of that order. The rooms are of the finest and most convenient in the hospital.

RIO GRANDE HOSPITAL PLANS.

Officials of the Rio Grande have received plans of the new hospital which is to replace the one that was burned at Salida last fall. It will be entirely fire-proof, structural steel being used throughout instead of timber. The main portion is to be two stories in height, and the roof will be covered with Spanish tiling. The building is to be 130 feet in length and thirty feet wide, and it will be so arranged that an annex may be built, an improvement which is apt to follow soon after the completion of the main building. There will be a separate heating plant, so that the basement may be used for store rooms and the apartments of employes. The whole will be finished in Italian renaissance style, and the interior arrangements are to be of the latest character, bath rooms, operating rooms, offices, parlors and the like being of the best.

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Dr. L. O. Maffett, president of the El Paso County Medical Society, and a prominent surgeon, died at Colorado Springs, Colo., April 6, after a week's illness with pneumonia. He was a native of Ohio, having been born there forty-one years ago. He was a single man, and leaves as family a mother and two sisters in Sandusky, Ohio, and a brother, also very sick, in Colorado Springs.

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Dr. I. B. Perkins and several other prominent workers identified with the Baptist churches in Denver are endeavoring to transform the Baptist College building, which has never been completed, into a well-equipped sanitarium for consumptives. The grounds embrace nearly thirty acres, in an admirable location.

THE PHYSIOLOGY OF OSTEOPATHY.

Some time ago Major G. W. H. Stouch slipped and fell on the icy pavement in front of St. Mary's church in Denver. Not having much faith in treatment at the hands of regular practitioners, he called in an osteopath. The final result not being too good, he sued the church and the city for damages. The defense was that the permanent injuries were due to the treatment rather than the original lesion and the jury brought in a verdict for \$1 damages.

The Denver Evening Post of February 23 said:

Speaking on this point, W. L. Harlan, doctor of osteopathy, said to-day:

"Some errors have crept into the case of Major Stouch. He had only one broken bone in the arm, the humerus, and certain of his ribs were dislocated. Then it was understood that the osteopath sought a cure by simply manipulating the patient's fingers, whereas the opposite fact was true.

"The parts were adjusted by manipulation with the fingers. The circulation is what we are after, as perfect circulation through the parts affected will work the cure desired. These parts will take from the blood all the building up of the parts that is necessary, and this is how in the case of a fractured bone the bone is knit together. We pursue the same course in the case of broken ribs; we set them without medicine. We look upon the human system as a machine which, if properly adjusted, will keep in perfect working order. In that way we eradicate disease from the system.

"If the brain has power to instruct the blood to build up a bone, a tooth, a

finger nail, is it not reasonable to suppose that it has power to build up any part of the body that is affected with some malady?

"The brain may be termed the drug store of the body, and all the chemicals introduced into the system which are not natural to it, such as arsenic, opium and so on, only serve to clog and stupify the workings of the body. If the osteopath understands what to do, and how to do it, he can adjust any part of the body so as to cause a broken bone to knit, or any part of the body which is affected by disease to build itself up. Therefore drugs are not necessary. We assist nature to cure without them."

This is about on a par with their pathology, which teaches (according to some of their Denver representatives) that people do not have consumption, but they suffer simply from a dislocated rib pressing on the lungs. Of course they always locate the dislocated rib, reduce the luxation, and their tubercular patients never die. It is also about on a par with a statement of one of their local bright lights, perhaps the above quoted D. O. may recognize it, while taking a course in anatomy in one of the local regular medical colleges (!). The said "bright light," in response to a question by the instructor as to the course of the ribs, replied, "Oh, well, they run 'slaunch-wise.'" It is not known whether or not his brain instructed his blood to direct his muscles not to move his skeleton to the college any more, but his attendance abruptly ceased thereafter.

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New York state legislature has appropriated \$150,000 for a State Sanitarium for Consumptives.

THE INDEX MEDICUS.

The suspension of the publication of the Index Medicus was the occasion of a great deal of regret to the studious members of the medical profession and the announcement that the work is to be taken up in France will undoubtedly cause a great deal of pleasure. The first number of *Bibliographia Medica*, with Dr. Marcel Baudouin as editor-in-chief, has appeared. It is to be a monthly, containing about 4,000 titles properly classified in each number, or 50,000 per year.

The subscription is 50 francs (\$10.00) for France and 60 francs (\$12.00) for other countries in the postal union. The address is Institut de Bibliographie, 93 Boulevard St. Germain, Paris. We wish it a long life and hope that it may meet with abundant support.

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THE MEDICAL AND SURGICAL REGISTER.

R. L. Polk & Co., Detroit, Mich., publishers of Polk's Medical and Surgical Register of the United States and Canada, request that all practicing physicians notify them of removals, newcomers, deaths, physicians retiring from practice, new medical societies, hospitals, asylums, sanitariums and mineral springs in their vicinity. This information will materially aid in revising the Medical and Surgical Register.

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Mr. Milton Rathbun, a New York hay and grain dealer, has, according to the New York World, completed a fast of thirty-five days' and six hours' duration. His reason for undergoing the fast was the threefold one of reducing weight, of proving the superiority of mind over matter and of dem-

onstrating a new medical theory that the brain is the dynamo of the body and that the brain is fed, not by the food we eat, but by the tissues of the body. During the fast he did his regular work, appearing at his office daily. At the conclusion of the fast he said that he had never felt better in his life, but looked as if he had just arisen from a bed of sickness.

This table shows the faster's weight and measurements before and after the ordeal:

Before—	—After.
207 pounds....	Weight 164 pounds
43½ inches.....	Chest 36½ inches
43½ inches.....	Waist 36½ inches
46½ inches.....	Hips 40½ inches
17 inches.....	Calf 14 inches
12 inches.....	Biceps 10 inches
14 inches....	Forearm 11 inches

He certainly accomplished his first purpose. The question arises, In what way were the second and third purposes accomplished, and what light has been thrown on them?

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A decision was handed down in a Massachusetts court which is exciting a fair amount of interest. The case decided was a suit brought against a North Adams doctor by a young woman. The suit resulted from a skin-grafting operation. The plaintiff agreed to furnish some of the skin needed, and her claim is that more skin was removed from her body than she allowed. The court found for the doctor, on the ground that, before the operation, the young woman did not restrict the amount of skin that could be removed, nor the place from which it could be taken. The plaintiff has taken an appeal and will carry the case to the State Supreme Court.

The official report of the Honolulu health board shows there were seventy cases of plague there up to March 26, sixty proving fatal.

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Manila advices, dated March 6, say it is estimated there have been 200 cases of bubonic plague in and around Manila. Eighty cases proved fatal, but there is no panic. The disease made its first appearance in Cavite. The first cases in Manila were discovered within a stone's throw of Otis' headquarters. Three deaths occurred before the nature of the disease was ascertained. Hundreds of inspectors were put to work, and large forces of Chinamen and Filipinos immediately began the work of cleaning up the city. The same advices report a smallpox epidemic in Bell's famous Thirty-sixth volunteer regiment. Lieutenant Tonerary and Lieutenant Wine and several soldiers are dead.

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It was noted in the Journal for February that Chas. H. Vivian had been charged by the Colorado State Board of Medical Examiners with practicing without a license. He was found guilty in the West Side Court February 14. In the testimony it was shown that he had also treated a Mrs. Steicher for supposed appendicitis from December 18, 1899, to January 1, 1900. She died. The treatment given was pronounced atrocious.

Vivian was sentenced to the county jail for thirty days, the maximum sentence. In sentencing him, Judge Butler remarked that there were much lighter crimes punished by heavier sentences. In his opinion the penalty provided by law was much too small.

The Supreme Court of Kentucky has decided that osteopathy shall not be practiced in that state. This action was taken on the report of a committee authorized by the State Board of Health to visit the Kirksville, Mo., school to determine whether it was a reputable school or not. The committee reported that while the buildings were substantial, they served to foist a deceptive scheme on the unwary public.

It is to be hoped that Colorado will protect her citizens from these irregular practitioners in a like manner.

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A family of five, named Madden, living near Comstock, Neb., were all recently poisoned by eating bologna sausage. They were not discovered until twenty-four hours later, when a neighbor, going in, found the 3-year-old girl dead and the rest of the family unconscious. The condition of the survivors is critical.

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The Las Animas County Medical Society, at its meeting March 5, selected Dr. J. W. Elston as its reporter for the Colorado Medical Journal.

A NEW ADHESIVE MATERIAL.

An original contribution to our knowledge of pathology was found in a recent examination at a medical college not a thousand miles away. In a description of healing by first intention the statement was made that "in a clean incised wound the parts are brought together, the excessive hemorrhage is stopped, and the two surfaces glued together with a solution of continuity."

BOOK REVIEWS.

CLINICAL LECTURES ON DISEASES OF THE HEART, LUNGS AND PLEURA. Designed for the use of Practitioners and Advanced Students of Medicine. By Joseph M. Patton, M. D., Professor of Internal Medicine, Chicago Polyclinic, Chicago. The Clinical Review Publishing Co.

In this thin volume (its size being due to the character of the paper used, there being nearly four hundred pages) we have a series of clinical lectures covering the field indicated in the title. Case histories are freely made use of to illustrate the thoughts desired to be emphasized, and numerous prescriptions given in detail here and there, as the author deems advisable. Therapeutics is given its proper importance, instead of being hurried over and slighted, as is the tendency on the part of many authors. The make-up of the book is not equal to its contents, an inferior quality of paper of at least two different kinds being employed. This, however, we can overlook more readily than we could the reverse condition—contents inferior to the mechanical workmanship.

RECOLLECTIONS OF A REBEL SURGEON. By Dr. E. E. Daniel, Editor of the Texas Medical Journal.

Dr. Daniel has given, in a most agreeable and pleasant way, recollections of his long-past war days. The many and various amusing incidents, which are so naively told, can not fail to draw forth an appreciative smile, which will be but the precursor of a hearty laugh from even the most sober and serious practitioner.

Dr. Daniel has graphically penned the difficulties which a surgeon during the civil war necessarily encountered in performance of his medical duties, yet at no time do these recitals become either dull or prolix.

Few authors possess the charm of description, in the use of the colloquial dialect, which Dr. Daniel has interspersed as occasion demanded. We sincerely trust that "Recollections of a Rebel Surgeon" will find a duly prominent place not only in the physician's library, but also on the office table, to be enjoyed by his patients.

CHRISTIAN SCIENCE. An Exposition by William A. Purrington, Lecturer on Legal Medicine in the University and Bellevue Medical School, Etc., New York City.

This excellent little volume, comprising less than two hundred pages, embodies the arguments set forth by Mrs. Eddy and her disciples, with the respective replies and discussions by the author.

A leading medical journal deemed it a sufficient criticism to reprint from Mr. Purrington's Exposition the frontispiece, which is the photo of a gangrenous foot, trusting that its subscribers would draw those inferences which would commend the book.

The arguments of this little volume are pithy and straight to the point; every quotation from the daily press, pulpit or elsewhere has been deftly inserted with direct relationship to the text. No space has been allotted to the dreamy preachings of a one-sided intellect, as is so often observed in books

of those authors who undertake to correct the mishaps of some perverted mind, and further persecute a sympathetic reader with their own arbitrary views.

It would be well for not only every physician to read this treatise on Christian Science, but see that his clientele find time to faithfully peruse its pages, in order that they may better understand those fallacies which have been foisted on a credulous public by Mrs. Mary Moss Baker Glover-Patterson-Eddy.

PROGRESSIVE MEDICINE. A quarterly digest of its Advances, Discoveries and Improvements. Edited by Hobart Amory Hare, M. D., assisted by Charles Adams Holder, M. D. Volume 1, March, 1900. Lea Brothers & Co., Philadelphia and New York, Publishers.

This is a work each succeeding number of which deserves commendation. Its purpose, to tell "a well-told tale of medical progress in all its lines of thought, told in each line by one well qualified to cull only that matter worthy of his attention and necessary to his success," is well carried out in the present volume. Not the least commendation is the fact that each contributor has been requested to use the narrative form, and express not only the views of the author cited, but his own opinion as well. This adds greatly to the interest and fascination (for so it may be expressed) of the work. The following chapters are treated in the present volume: The Surgery of the Head, Neck and Chest, by J. Chalmers DaCosta, M. D.; Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia and Influenza, by

Frederick A. Packard, M. D.; The Diseases of Children, by Alexander D. Blackader, M. D.; Pathology, by Ludwig Hektoen, M. D.; Laryngology and Rhinology, by A. Logan Turner, M. D., F. R. S., and Otology, by Robert L. Randolph, M. D. Each chapter will appeal to the reader specially interested in that subject, as being the best and most interesting, and each chapter will appeal to each reader as an exceedingly interesting and valuable resumé of the recent advances made in its subject.

THE SEXUAL INSTINCT, ITS USE AND DANGERS AS AFFECTING HEREDITY AND MORALS. By James Foster Scott, B. A., M. D., C. M., 1899. Price, \$2. New York; E. B. Treat & Co., Publishers.

This review is somewhat belated. The book was received by the Western Medical and Surgical Gazette during its slumber. The work has lost none of its value, however, during the short time which has elapsed since its publication; it is as well worth reading now as then. As the author says in the preface, it "contains much plain talking." It treats of matters usually avoided by medical men, and handles them without gloves. It is a powerful protest against unchastity in both sexes, but especially in men, and is to be classed with the popular medical works. It is rather to be regretted that the author has approached his subject rather from the theoretical theological standpoint than from the strictly scientific, but it is possible that it will in that way have a greater effect upon a greater number of readers. The work is an interesting one, and one which the physician can readily place in the hands of the laity.

AT THE OUTPOSTS OF MEDICINE.

SATAN'S LAMENT.

Satan and Sin argued a point,
 On the differing of physicians:
 Not that they could remove a joint,
 Or define linno-sanguineous conditions.

Said Satan: "Of doctors, to me, a few
 Have traveled in rapid succession,
 For never a one was in a church pew,
 Or thought of attending confession.

"In my medic collection I number
 An osteopath famed for appendical percuss,
 Who wrangles with an Eclectic wonder,
 Thus raising a damnable fuss.

"Locked in my choicest dungeon, I keep
 One from Christian Science stock bred,
 Free from the breath of a Vitapath sweet,
 Undisturbed by a solemn Allopath's tread.

"My troubles began when the Curist by
 Faith
 Joined hands with a Hypnotic saint,
 Scoffing my poor little Hahnemann waif,
 Accusing my Adventist of carnivorous taint."

Said Sin: "Satan, your troubles are many,
 But you relate only of hell;
 Think of me, with nary a penny,
 In the land where these doctors dwell."

CUPID ON DUTY.

She was a probationer, mild and green,
 With eyes and lips the fairest e'er seen.

He was a Westerner, sturdy and bold,
 The house physician, with dignity cold.

Swiftly through the corridors she fled,
 When she heard the Interne's tread.

He laughed at time and matron fear,
 Swearing to meet this aproned dear.

She with tact, due to her sex,
 Skillfully avoided him on some pretext.

Six months passed, and at an operation
 She patiently sponged at his dictation.

"Doctor, do you think I'll do?"
 She gasped, when the work was through.

"Certainly, dear," was his reply,
 "If you will ever on me rely."

Now the happy pair have fled
 To the parson's to be wed.

Reader, as you are well aware,
 This flirtation began on the hospital stair.

✽

When Lot's wife was transferred to
 salt
 Before his starting eyes,
 It caused old Col. Lot to halt
 In nine kinds of surprise.
 He eyed the form from foot to head
 That once was tender flesh,
 Then, turning from the pillar, said:
 "She always was too fresh!"
 —Denver Evening Post.

ALLOPATHIC TALKER—HOM'OPATHIC BRAIN.

There's a tiresome, windy nuisance
that's encumberin' the earth,
Men that never ort to suffered from
the accident o' birth;

Ort to never been created in the noble
human form;

Noisy drones forever buzzin' in the
busy earthly swarm.

They are cussed with vocal organs that
are never out o' gear,

But are always keen fur business when
they find a lis'nin' ear;

They are swelled with self-importance
—egotistical an' vain—

Men with allopathic talkers an' with
hom'opathic brain.

They will tackle any subject from the
weather to the war,

Try to settle gravest questions that we
pay our statesmen fur,

They will chatter, chatter, chatter with
persistence most intense,

An' their flood o' vocal cackle doesn't
show a grain o' sense.

Haven't got no earthly mission but to
manufacture talk,

If they'd hit a solid idee it would give
their nerves a shock,

An' they're strung from Californy to
the rocky coast o' Maine,

Men with allopathic talkers an' with
hom'opathic brain.

There is nothin' built to suit 'em, every-
thing on earth is wrong,

'Cept themselves, an' that forever is
the burden o' their song,

An' you'd think to hear 'em talkin' that
the cusses as a rule

All inherited their kickin' from the ol'
Missouri mule.

Seems to them a great misfortune, one
that's mighty hard to bear,

That they ain't a runnin' matters from
the presidential chair;

They would soon correct our evils, find
a turnin' to the lane,

With their allopathic talkers an' their
hom'opathic brain.

They will start their tongues to goin'
at the breakin' o' the day

An' till sleep at night comes o'er 'em
keep a chatterin' away,

An' I reckon that the angels who their
nightly vigils keep

Could inform us that the cusses do
some talkin' in their sleep.

Seem a usin' vocal organs that will
never tire nor wear,

That will never rip nor ravel, fray
around the edge or tear—

O, they always give a feller six or seven
kinds o' pain—

Men with allopathic talkers an' with
hom'opathic brain.

—James Barton Adams, in the
Denver Evening Post.



THE UNDERTAKERS' TRUST.

We gaze into each other's eyes in dumb
amazement now,

The corrugating lines of care deep
scored in every brow,

And o'er us comes a clammy chill, un-
canny sort of feel

That winds us in its snaky coils from
cranium to heel.

We've felt the painful sting of trusts in
everything we eat,

The shoddy clothes upon our backs, the
shoes upon our feet,

And now the cursed octopus e'en
reaches for our dust,

For stricken Denver is to have an un-
dertakers' trust!

We've offered up our prayers to the leg-
 islative god
 To legally relieve us from the cutting
 of the rod
 Monopoly is wielding with such wick-
 ed, crushing power,
 To sweep from off our mortal skies the
 clouds that 'neath them lower.
 With pen and tongue of eloquence
 we've battled with our might,
 Have hurled at combination wrong the
 hurtling shafts of right,
 But in humiliation we're at last com-
 pelled to bow
 Unto a trust that's bound to get the
 deadwood on us now!

 Trust arrogance astonished us as day
 by day they'd light,
 Like buzzards in a carrion field, on ev-
 erything in sight,
 Yet did we try to bear the cross hero-
 ically brave,
 Not dreaming they would follow us
 like vultures to the grave.
 Soon right into the house of death will
 come the grasping clique
 To sink their talons into forms too dead
 to make a kick,
 To take the cold and pulseless clay into
 their greedy arms
 And rob the peaceful state of death of
 all its restful charms.

 No longer can the poor ones in our
 midst afford to die
 In any sort of decent shape; the rich
 alone can lie
 In packing cases which their friends
 can show with honest pride
 When neighbors call to look upon the
 party who has died.
 No longer can we face grim death in
 calm and fearless way
 Well knowing how the octopus will
 gloat above our clay,

No longer in a Christian mood in glad-
 some triumph sing:
 "O! grave where is thy victory? O!
 death where is thy sting?"
 —Denver Evening Post.

✽

Sunshine in the valleys, sunshine on
 the hills,
 Rays of sunshine dancin' on the ripplin'
 rills,
 Sunshine in the medders, sunshine on
 the plains—
 Bright free silver sunshine, sort that
 seldom wanes.
 Sunshine in the country, sunshine in
 the town,
 Streams o' spring style sunshine jest a
 rainin' down,
 Now an' then a cloud-sky to give the
 sun a rest;
 That's ol' Colorado, empress of the
 West.

✽

"Will you wear this little picture next
 your loving heart?" she asked,
 And a shade of apprehension as of
 doubt his features masked,
 And she cried: "You do not love me
 with the love you've oft ex-
 pressed,
 Or you'd feel no hesitation granting
 such a small request!"
 "Love you? Can you ever doubt me?
 But at present it must lie
 Near my heart, but not against it; but,
 my dear one, by and by,
 When the spring is here for certain and
 the warm surroundings let
 Me discard my chest protector, it will
 go up next, you bet!"

✽

Hewitt—I have been threatened
 with appendicitis.
 Jewett—Who threatened you—the
 doctor?

A smile is festooned on his face, he
 steps almighty high!
 So buoyant are his strides you look to
 see him rise and fly!
 He greets a friend with hearty shake
 and whispers in his ear,
 And smilingly they seek a shrine to
 have a social beer.
 No hero ever felt the pride that swells
 his manly breast,
 He's scaled the mount of happiness and
 poses on its crest,
 And sips unto its fullest depths the
 golden cup of joy
 And heavenly felicity; his first-born is
 a boy!

When the preacher from the East took
 the church at Devil Mound
 The impression he created gave him
 pleasure,
 And the worshippers all thought in
 their parson they had found
 What the worldly ones would call a
 "corking" treasure,
 But his popularity wasn't very long to
 stand,
 And he left his angry charge beneath
 a shadow,
 Just because he preached about what
 he called a better land
 Than their own beloved, peerless
 Colorado.

—Denver Evening Post.

THE SAVAGE BACHELOR.

"But how do you account for so
 many couples being happy, if married
 life be such a torture?" asked the
 Sweet Young Thing.

"I don't," answered the Savage
 Bachelor. "And that reminds me. I
 had an uncle who had rheumatism for
 eighteen years. Then he got cured.
 For a long time he was the loneliest
 man imaginable."—Indianapolis Press.

THE CHEERFUL IDIOT.

"Who was the sporty guy I saw you
 talking to?" asked the shoe clerk
 boarder.

"One of our most noted ethnolo-
 gists," replied the Cheerful Idiot.

"Him?"

"Yes. He writes books on the races."
 —Indianapolis Press.

An anti-tobacco lecturer declares
 that a cigar contains acetic, formic,
 butyric, valerianic, propionic and
 prussic acids, creosote, phenol, am-
 monia, sulphurated hydrogen, nicotine,
 viridine and picoline. Ask some drug-
 gist friend to quote prices on all these
 drugs, and then stop kicking about
 your cigar bills.

WHERE HIS WAS.

"Say," said little Freddie to Mr.
 Murgleson, "do you know what?"

"No; what?"

"When sister Fannie comes down
 stairs you watch and see how she
 limps. We've all been getting vac-
 cinated. Mine's on my left arm."—
 Chicago Times-Herald.

This touching obituary verse appears
 in the last issue of our high-altitude
 contemporary, the Lost Creek Lyre:

Another from our ranks hath went
 Across the so-called mystic river—
 Another old-time resident
 Hath gone from trouble with his
 liver.

The soul from out its prison fled
 And went, we trust, direct to heaven,
 Leaving the body still and dead
 At twenty minutes past eleven.
 (Mountain time.)

—Denver Evening Post.

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ORIGINAL COMMUNICATIONS.

Southern Colorado—its Climate—Therapeutic Value in Diseases Other Than Phthisis Pulmonalis.*

By H. FOSTER HAZLETT, M. D., PUEBLO, COLO.

The Centennial State may, for convenience, be divided into three rectangular sections, the long axis extending from east to west, and named Northern, Central and Southern. The latter territory, with which we have to do in this paper, embraces twenty-four counties in entirety and five in part, aggregating 35,000 square miles.

The climate of Southern Colorado may not be said to differ much from other parts of the Rocky Mountain region near this latitude, but the few instances in which it may be considered superior to Wyoming, the northern two-thirds of this State, and New Mexico, for the conditions we shall later demonstrate, are apparent to those who manifest interest and devote time and study to observation and consideration along the lines of medical climatology.

Southern Colorado possesses three distinct groups of arid high altitude climate: First: Beginning at the eastern

border or Kansas line, the prairie-plains, ranging from 3,200 to 4,500 feet in elevation; second, the foothills and adjoining valleys, varying from 4,500 to 7,000 feet; third, the natural parks, varying from 7,000 to 10,000 feet.

The rainfall of this section varies from eight to twenty inches per annum, being more copious near the higher ranges and peaks. It does not, however, necessarily increase with altitude, as Gunnison, 7,680 feet, with ten inches, and Pagosa Springs, 7,000 feet, with eleven inches, have each less rain than Pueblo, 4,734 feet, with eleven and a half (11.62) inches, and West Las Animas, 3,905 feet, with eleven inches.

The "wet season" (?) occurs during the late spring and early summer months, when practically seventy per cent. of the rainfall occurs. During the winter months of December, January diseases that are not more active in

*Read before the Pueblo County Medical Society, February 3, 1900.

and February the average precipitation, which includes snow, at Pueblo, for ten years (1888-1897 United States Weather Bureau report), is less than a half (.46) inch.

While the snowfall is comparatively light in the prairie-plain and foothill regions, the same cannot be said of the park and mountain region, where a considerable quantity falls, though less than farther north.

The average annual temperature for Southern Colorado, taking the average for five years at Pueblo (1893-1897 Weather Bureau report), is 51.3 degrees F., and that at Denver, 120 miles north, is 49.9 degrees F. (report United States Weather Bureau). The mean annual temperature at West Las Animas, which is located in the eastern part of Southern Colorado, is 50 degrees F.; Canon City, situated in a valley near the entrance to the Arkansas Canon, forty-five miles west of Pueblo, 52.75 degrees F.; Silverton, located in the western part of our territory under discussion and among the mountains, and Pagosa Springs, nestled in a beautiful valley on the banks of the prettiest trout stream in this country, and among snow-capped mountains, in the southwest corner of Colorado, near the New Mexican line, each about 47 degrees F. The mean temperature of Pueblo for the winter months, is 32 degrees F., which, it must be remembered, is the apparent temperature as recorded by the mechanical thermometer, and not the sensible temperature or that experienced by the human body. At sea level and the lower altitudes generally the air is moisture-laden, while here, in Southern Colorado,

the atmosphere shows an average of only two grains of moisture to the cubic foot for the four seasons. This climate possesses a general mean relative humidity during the year of but fifty per cent. In order for the temperature records in this and other high altitude regions to have an equitable representation to Eastern minds the published records here, or in similar climates, should also be recorded from the sensible or wet bulb instrument.

The wind movement of this section differs not from that of the State in general, and while at times it appears to be unpleasantly prominent, an investigation into this factor of climates shows the monthly movement of wind at Pueblo to be only 5,438 miles, as against Chicago with 7,007 miles, San Francisco 6,863 miles, New York 6,883 miles, Boston 7,997 miles, and St. Louis 7,011 miles. "A possible explanation of the apparent force in Colorado is that the wind blows with greater irregularity, more frequently in small squalls or gusts, than on the sea coast. Another reason why it is felt more strongly is that the towns are not closely built as in Eastern cities, and detached houses and wide streets offer a greater sweep for the wind. In the sheltered valleys of the foothills and in the smaller parks there is much less wind, the amount varying with the local conditions." (Solly's Med. Climatology, page 243). The prevailing winds at Pueblo, and at most points in this section the most advantageous, are from the northwest. East winds are usually continental and are storm gatherers, but, happily, occur infrequently. It is a well-known fact

that continuous air movement is an advantage, and that perfect stillness is only desirable in freezing weather. In arid regions these wind currents are great purifiers of the atmosphere, and, no doubt, act as such in place of rains and frequent electrical storms.

The climate of Southern Colorado may be said to possess the advantage of more moderation in winter than farther north, and summers not uncomfortably hot. Here is found a dry and sunny climate with bracing qualities, permitting a maximum of outdoor exercise during all seasons. Sand storms are partly replaced by occasional dust storms, which are of short duration and are noticed principally in the manufacturing sections where street sprinkling is neglected.

Railroads and good, substantial cities and towns are not wanting. Pueblo, the metropolis of the section and the second city in population of our State, is provided with five trunk lines, good hotels and boarding houses. Good drainage and other sanitary advantages not to be found in large cities are characteristic features of Southern Colorado centers of population. The health-seeker of to-day need not fear any of the primitive customs and crude accommodations experienced by Mark Twain in his stage trip from St. Louis to Nevada, and which he so vividly elucidates in his familiar book, "Roughing It." Neither need he lack for the means of recreation, employment or business opportunities. Then, too, the cost of living is less than in the sparsely settled territories to our south, or in the sections farther north, where railroad facilities are lacking and irrigation is impracticable.

With such natural advantages existing, and a climate world famed for its power over the White Plague of this century, this region is well blessed. However, the application of climate to diseased conditions is yet broader than this. Even the healthy subject, who changes his residence to a climate radically different from that where he has been reared, or in which he has lived for many years, is apprised of changed physical influences upon his health. Properly applied climate must do much more for the person with certain functional or organic disease.

In former times the application of climatic influences was almost limited to the alleviation of phthisis pulmonalis because of its adaptability, pre-eminent importance and wide distribution. The result has been that medical climatologists have seemed to confine their efforts to investigation upon this disorder. At present our profession and many of the laity have a more accurate knowledge alike of the potentialities and limits of climatic influence in mitigating other ills. Of these none seem more suitable for first consideration than malaria. In respect to its etiological factors malaria may be likened to pulmonary tuberculosis in regard to the climatic influences which favor its development, and those which tend to correct it. There are few damp than in dry climates. This is eminently true of malaria, for it is agreed that the conditions favoring malarial fevers are damp, "bottom lands," that are exposed to an annual overflow, swampy regions, where low river banks, alternately covered and uncovered with water and decomposing vegetable matter, are exposed to the sun in a climate

of high humidity, and where the average temperature for twenty-four hours is above 58 degrees F. While the salts of quinine counteract, for a time, this disease, the medicament falls far short of being a specific, and the economy as well as the plasmodium malaris, in time, becomes more and more tolerant of its physiological action, which is finally, but feebly, antagonistic. Then it is that proper climate should be advised and sought, for it is after all a self-evident fact that change of residence on the part of the malarial subject to some locality where he will not be constantly subjected to reinfection, is a *sine qua non* of successful treatment in malarial diseases. I am not aware of the existence of any disease for which climate can do so much as for this disease, and that the climate of Southern Colorado fulfills all the necessary requirements inimical to the existence or continuation of malaria I am sure cannot be disputed by clinician or student of the meteorological conditions here existing.

Cases of chronic bronchitis do remarkably well at a medium altitude in this climate, and the fact that a majority of these cases finally become tubercular if the patient remains under the physical environments under which the disease originated, is all the more reason for choosing such a change of climatic conditions as are here found.

Many cases of unresolved pneumonia are sent to this region, but should be well selected. The heart should be examined, not only during rest, but after exercise, and especially after climbing stairs. In patients under thirty-five years of age a moderate amount of

weakness is no contraindication if exercise be taken carefully and under the direction of a local physician. The results in these cases are brilliant in proportion to the amount of obstruction, age of the patient and condition of the circulation.

In the climatic treatment of bronchial asthma it is very important to ascertain the active actiological factors, and to remove as effectively as possible, by properly selected climate the *prime* cause, for it is impossible to separate these and to treat each in its appropriate climate. If the neurosis is the cause to be especially remedied, the climate must be chosen for its quality of sedation or stimulation. The cases which do especially well here are those of intrinsic origin, accompanied by a chronic anæmia in which the neurotic habit can be broken up. Cardiac cases of adult age do very well at our medium altitudes; but it is among youthful asthmatics and those with little or no complicating emphysema that most of the permanent cures are effected.

The invigorating atmosphere and brilliant sunshine of this section do much for neurasthenics in improving appetite and strength, and in relieving the insomnia which is such a common and distressing accompaniment. Anæmia, likewise, is benefited here, for the blood soon develops an increased ability to absorb oxygen, which, in turn, results in an increase of red corpuscles and hæmoglobin.

Laryngeal tuberculosis is a condition for which change of climate is frequently advised and sought. The only reports which I could find upon this subject as

dealing with Colorado climate are those of Dr. S. Edwin Solly of Colorado Springs, and Dr. Robert Levy of Denver. Both reports are interesting, and while they do not admit of joint tabulation, the results in each are favorable to high altitude climates. It is generally agreed by physicians practicing in this section that climatic change cannot supplant local treatment. The patient seeking climatic aid for tuberculous laryngitis should not fail to take advantage of surgical procedure when possible and required. This is eminently true of those cases showing ulceration. It is in this stage of the disease that nature seems so little disposed toward reparatory effort, although instances of spontaneous cicatrization have been reported by Bouveret, Jarvis, Virchow and

others. There probably is not another disease in the list for which climatic changes are advised in which opinions vary so much as in this, and I would not attempt, in this paper, discussion upon a field of matter so ample as this subject affords. However, I believe that clinical experience and observation proves that the question of climatic change for all other forms of tuberculous disease is answered upon the same grounds as that of change for pulmonary tuberculosis. If this is true, it is not difficult to understand why laryngeal tuberculosis, which is almost invariably accompanied by lung tuberculosis, does so well in Southern Colorado, for under proper treatment laryngeal improvement will go *pari passu* with that of the lungs.

Infant Feeding.*

By H. B. WHITNEY, A. B., M. D.

Professor of Medicine in the Denver College of Medicine, Denver, Colorado.

A subject so broad and so important as infant feeding cannot be even superficially covered in a single brief address. I shall confine myself strictly to certain questions of bottle feeding during the first twelve months of life—a field of medicine not wholly simple, not wholly cleared of difficulty even for the experienced practitioner, and of perennial interest because of the magnitude of possible results.

I shall take it for granted that some form of modified cow's milk must be the basis of any food suitable for the first year of life. This is the teaching

both of theoretical reasoning and of the wide experience of most eminent pediatricists. And let it be understood that the term "modified milk" does not include such foods as condensed milk, Nestle's Food, Horlick's Malted Milk and other preparations of that ilk. It means clean, dairy milk from a good herd, properly prepared and properly administered according to the age and condition of the child. The great problem is as to the exact method of preparation and feeding which should be pursued in the individual case.

Now, since the purpose of this ad-

*Address to the Denver and Arapahoe Medical Society, March 13, 1900.

dress is to be wholly practical, I shall not enter into the various methods of milk modification, nor attempt to discuss their relative value. I shall, with your permission, confine myself wholly to my own personal experience, and speak only of those things which I myself have found practical and serviceable.

And so I may state that having begun my practice some fifteen years ago with simple dilution and indefinite sweetening, I then advanced to the use of such cream mixtures as those of Rotch and Meigs, while for the past two or three years I have, I think, still farther progressed by adopting the formulæ 2, 4, 7, and others of Holt, as given in his *Diseases of Infancy and Childhood*. These formulæ consist in varying proportions of milk, centrifugal or 20% cream, water, and sugar of milk. They can be easily learned, or they can be copied and kept constantly at hand for reference. The use of the formulæ mentioned permits of a fairly accurate dosage of the various constituents of milk, and, as Holt truly says, is amply sufficient for the great majority of cases in practice.

Let us take for example a healthy child of three months who has been hitherto fed solely upon the breast and who must from now on be artificially fed. Formula 4 requires three ounces each of milk and centrifugated cream, 18 ounces of water, and three even tablespoonfuls of milk sugar. This gives a mixture of proteids 1 per cent., fat 3 per cent. and sugar 6 per cent. While maintaining almost the normal proportions of sugar and fat, it at the same

time keeps the proteids at a low figure—one-half only of the normal—and enables us to gradually accustom the child to this the most troublesome constituent of cow's milk.

A corresponding simple dilution of 1 part milk with 3 parts water would give us but 1 per cent. of fat; a reduction which would be unnecessary and harmful. We should never forget that the natural carbohydrates of the milk, fat and sugar, rarely cause disturbance; and that relatively large proportions of these constituents may be safely maintained, even in very young and delicate children. By slowly increasing the amount of milk in Formula 4 we may eventually reach Formula 7, which provides for 9 ounces of milk instead of 3, the cream and sugar remaining the same, and thus gives values of 2 per cent. proteids, 4 per cent. fat and 7 per cent. sugar. I would earnestly recommend the use of these formulæ, as a working basis, to every general practitioner.

In the great majority of healthy children whose stomachs have not been disturbed by improper feeding and experiment, these cream mixtures are well borne, the child thrives under them and they reduce to a minimum the possibility of subsequent scurvy or rickets. It is of course presumed that the feedings are properly given as to quantity, interval and general cleanliness. Sterilization I believe to be, as a rule, unnecessary in Denver. Without going into this question at any length, I will simply say that the triumphs of sterilization have been chiefly won in those cities where milk is often 36 hours old before it

reaches the consumer. Here, where fresh milk is easily obtained, I would pasteurize only in very delicate or dyspeptic infants during the warm season.

But occasionally, even in a well child, the simple cream mixture does not seem to quite agree. There is more or less colic and flatulence, or slight vomiting, or greenish stools, or constipation, or apparent anorexia, or wakefulness at night; and the question will often arise as to whether the food is a proper one. Then there is but one final court of appeal—the scales. In a general way of a child is steadily gaining to the extent of a pound or more a month, any non-febrile disturbance may be regarded with relative equanimity. I have made many blunders in the way of constant meddling with the food of infants whose stools were slightly green, or who vomited a little or presented some other sign of slight indigestion, while steadily gaining in weight. I was once sadly humbled and yet taught a most salutary lesson by a very saucy and quite ignorant nurse girl. An infant was constantly fretting and moderately dyspeptic. Under the several refinements of diet which I suggested he neither gained weight nor ceased to fret. The nurse finally took the bit in her teeth, put the child on a plain cream mixture twice the strength of any I had dared to give, paid no attention to the appearance of the stools, and within a month the child was gaining enormously and every symptom of dyspepsia had disappeared. It certainly is not always best to keep changing the food, still less to constantly reduce its strength, because of mod-

erate dyspepsia. In not a few cases a modification of the old axiom, Be sure of your food and then stick to it, will guide most surely to a happy result.

Still there are very many cases in which certain judicious modifications are useful and sometimes necessary. Let us consider briefly a few of these:

Constipation is an exceedingly common source of annoyance, especially, it seems to me, in Denver. This is often due to a deficiency of fat, and the latter may be increased, even beyond 4 per cent., as, for example, by using 4 or 5 ounces of cream in Formula 7. Or we may use oatmeal water as a diluent in place of plain water, made by stirring two tablespoonfuls of oatmeal into a pint of cold water at intervals for 15 minutes and then straining through a cloth. Sometimes a small pinch of sodium phosphate may be added to each feeding; or a little olive oil may be given two or three times a day. One of the best drugs for temporary use is a few drops of the aromatic extract of cascara at night.

Green stools are usually indicative of fermentation and in most cases, of course, demand antifermentatives and temporary suspension of the regular diet. But in moderate degree the symptom is not to be taken too seriously. Mothers especially are likely to have acquired exaggerated notions of its significance, and often have to be taught that a slightly greenish tint of the stools is not incompatible with steady and satisfactory growth.

The same is true of lumps and curds in the stools. An excess of fat may occasionally give this appearance. Even

when the lumps are really undigested casein it may not always be advisable to change the proportions of a food upon which the child is making a steady gain. As you perceive, it is the scales, and ever the scales, to which appeal must be made. In other cases the proportion of proteids must be diminished, or their digestion must be artificially assisted by some form of pancreatic ferment. There is no one method of milk modification which has given me so much satisfaction in delicate and dyspeptic infants as partial peptonization. Usually 15 or 20 minutes is sufficient, though occasionally the desired result will not be attained unless peptonization is continued for at least an hour. I might also, in this connection, mention the use of somatose as a substitute for casein; the curd being first removed and the somatose substituted to the amount of two or three teaspoonfuls for the twenty-four hours. I have seen a steady and very material gain under such a mixture, but its cost is such as to limit its use to exceptional circumstances and cases.

Whether or not the digestibility of the casein is increased by the use of certain more or less glutinous substances as diluents is still a mooted question. The substitution for the water of any formula of a mixture of lime water and barley water, or of the latter alone, is, to say the least, a harmless procedure, and one which I have often used with some apparent benefit. My recipe for barley water is one of Eustace Smith's—two teaspoonfuls of pearl barley to a pint of water, boil down to two-thirds of a pint, and strain. It is not so cer-

tain that the more distinctly cereal mixtures are devoid of all danger, though it is a well known fact that Jacobi advocates their addition to the milk in small quantities from a very early period. Personally I have rarely thought it wise to use anything stronger than the above-mentioned barley water before the age of six months, and in most cases I prefer to wait until the eighth or ninth. When a cereal seems advisable I nearly always begin with Mellin's Food, adding a small teaspoonful or more to each feeding. I do this for three distinct purposes—one or all of which may be had in the individual case. In the first place I give it to older infants, say at the beginning of the ninth month, as a preparation for weaning, it being desirable to accustom the stomach gradually to the digestion of amylaceous foods. Again it appears occasionally to assist in the difficult digestion of milk, theoretically for the same reason as barley water or gelatine. And finally, it seems to impart a flavor to the food which many children enjoy; for it is an undeniable fact that when a child refuses his food or takes it only in small or insufficient quantity—an exceedingly troublesome thing to deal with—the addition of a small quantity of Mellin's Food often seems to make it palatable, and from now on the child will eat with an evident relish. This is invariably my first recourse when a well child seems unwilling to eat.

Another troublesome and by no means infrequent symptom of indigestion is colic and flatulence, often also accompanied by a general odor of sourness. It is hardly necessary to remind

you that the first thing to investigate in any such case is the care given to the bottle. This being disposed of, one has next to consider the proportion of sugar and fats. We are told in the books, and it is undoubtedly true, that a normal percentage of sugar rarely causes disturbance. Nevertheless it will not infrequently be found of advantage to temporarily diminish the amount of this constituent. Most children, again, do better on milk sugar, but exceptionally the ordinary cane sugar answers best. Still more often is it necessary to reduce the quantity of fat, and in some cases, where but little can be taken, this can be advantageously supplemented by a little olive oil, given pure, two

or three times a day. Lime water, up to a third of the total quantity of food, is usually of especial benefit in these cases of fermentation.

Drugs are not often of much value in infant feeding, except to meet occasional indications of acute origin. Castor oil is one of the remedies which is least liable to be abused, and which sometimes may be profitably given every few days for long periods. A favorite aid to digestion which I often use with benefit is Wyeth's Elixir of the Digestive Ferments, of which five or ten drops are given to infants before each feeding. Eudoxin also seems to be of decided influence in effecting a diminution of flatulence and colic.

Injuries to the Eye from Accidents in the Mine.

By MELVILLE BLACK, M. D., DENVER, COLO.
Professor of Ophthalmology and Otology, Gross Medical College.

This subject will be divided into fourteen chapters, and will be dealt with in as clear and concise a manner as possible. It will be my endeavor to treat of the eye as injured in the mines in such form that the busy mining surgeon will

not find it too long to read. I shall confine myself to as few lines of treatment as possible, recommending one line of treatment for as many different injuries as it will cover, noting exceptions and modifications as indicated.

CHAPTER I.

Protection of the Eye.

The great number of eyes lost every year by miners from chips of steel flying from the head of the drill or hammer, or from flying particles of rock, should cause us to urge upon these men the necessity of protecting their eyes while engaged in dangerous work. When a man has lost one eye he usually hesitates about returning to his former oc-

cupation because of fear of his losing his other eye. It has been my practice to tell these men that they can return to work with a fair degree of safety if they will wear suitable eye protectors.

I have tried various forms of eye protectors, all of which were more or less satisfactory. Lamb's eye shield, which is made of mica fronts, with cork sides,

are very light, do not interfere with vision, and offer considerable protection to the eyes. It is true that a chip of steel or a piece of rock flying with great speed would penetrate the mica, but it would there expend its force and would not do much damage to the eye. A protector can be made out of a simple piece of wire mesh, as recommended by Simon Snell of Sheffield, England. It is to be made in the following manner: Take a piece of No. 100 wire mesh three by six inches in size. Round off the ends and cut out a piece below, so that it will fit over the nose; bind the edges with thin leather or strong cloth, and bulge out the center of each half, so that a space will be afforded between the shield and the eye. It will be found that this shield can be easily moulded to the shape of the face. Strings are sewed to the ends and carried around the head over the ears and tied at the back. This makes a shield with good ventilation, and can be made by the

workman at the cost of only a few cents. It is probably the least liable to penetration from flying foreign bodies. The principal objection to it is that vision is obstructed to a certain extent. However, after a little use of it the wearer becomes used to the dim vision and thinks no more of it.

The important consideration is to get the miner to use any eye shield. Miners expose themselves to all kinds of dangers without a thought of the consequences until misfortune comes. The injury of one does not seem to make the others more careful.

Our duty as physicians should be to endeavor to lessen these dangers so far as it lies in our power by urging the mine operators to pass certain rules governing the actions of the men in their employ. Every miner who works under ground, and in the vicinity of danger, should be compelled by the rules of the mine to wear some form of eye shield.

CHAPTER II.

Examination of an Injured Eye.

The external appearance of the lids and surrounding parts should be noted before any attempt to touch the part is made. Look carefully for any penetrating wound of the lids that might cause suspicion of injury to the important underlying structures. The direction whence the injury came, what the patient was doing at the time, and the nature of the material causing the injury, are important facts that should be learned while the injured eye is being observed. The next step is to determine if the eyeball has been injured,

if so, to what extent, and if any foreign substance has penetrated the globe, and if it is lodged within the globe. If the patient is seen soon after the injury, and before swelling of the lids has set in, it may be possible for him to open his eyes, and by having him read from a test card, book or paper, the amount of his vision may be determined. If his vision is greatly damaged, determine at what distance he is able to count fingers. If this is impossible, whether he can see the shadow of the hand passed between his eye and the light. And if

this, again, is impossible, whether he can determine light from darkness. Each eye should be tested in the above manner separately. If the lids are much swollen they may be held apart with lid retractors, or possibly by the fingers of the operator. If the eye is very sensitive to light it is well to drop between the lids a one per cent. solution of holocain, which has the same anesthetic properties as cocain, but is preferable because of its strong antiseptic properties, and because there is no reaction following its use. After waiting for a few moments it will usually be found that the photophobia has largely disappeared when the examination of the eye may be proceeded with without the patient resisting.

The vision of the eye having been determined, examine carefully the cornea by focusing light upon it with a lens of three inches focal distance. Note if the cornea is abraded, lacerated, cut, or if there has been a penetrating wound, and note carefully if any foreign bodies have been lodged on or in the cornea. If the cornea has been penetrated, it is possible that the anterior chamber will be found empty, as indicated by the iris being approximated to the posterior corneal surface. This is especially true if the case is seen soon after the injury. If it is not seen early and the wound in the cornea is small, the aqueous humor in the anterior chamber will probably have reformed. Observe if the pupil is central and circular. A displacement of the pupil, or a pupil not circular, may be caused by an entangling of the iris in the corneal wound or in a ciliary wound,

or to a folding back of the iris upon itself, or to a wounding of the iris.

The ophthalmoscope should now be called into use to determine if the lens or deeper structures have been injured, and if the foreign body can be seen lodged within the globe. During this examination the room is darkened, and by the aid of a candle or lamp held a little back of and to one side of the eye under examination, the light is thrown from the mirror of the ophthalmoscope into the pupil of the eye. Hold the ophthalmoscope about a foot from the patient's eye, then by looking through the sight hole in the mirror observe if the pupil shines with a bright red luster. If it does not, the amount of diminution of the pupillary reflex will be in proportion to the extent of the opacity. This opacity usually depends upon an opaque lens (traumatic cataract), or blood in the anterior chamber, or in the vitreous. If the pupillary reflex is less brilliant than it should be, or the pupil is dark, substitute the focusing lens for the ophthalmoscope and bring the rays of light from the candle or lamp in focus, first upon the cornea, then the iris, and then the pupillary space. If any of the anterior structures are opaque it is very easy to see by the aid of the focal illumination which one is at fault. If all are clear, then the pupillary reflex is abolished or diminished because of some pathological condition of the vitreous.

An opaque lens or cloudy vitreous would indicate that the penetrating wound is deep. If the piece of metal or rock causing the wound was known to have been withdrawn, or had fallen

out of the wound by its own weight at the time of the injury, a foreign body in the eye would not be suspected.

Where the history and the condition of the eye indicate a penetrating wound with probable lodgment of the foreign body in the eye, it is often possible, if the patient is seen soon after the injury, to see the foreign body with the ophthalmoscope. The examination is made by holding the ophthalmoscope from one to two inches from the patient's eye, when the light is thrown into the eye as above directed.

The above examination having been gone through with, foreign bodies in the conjunctival cul-de-sac should be looked for as well as any lodged on or in the palpebral and ocular conjunctiva. This examination is conducted by everting the upper and lower lids and inspecting their surfaces. The lids being turned back into position and widely separated, the patient is told to look in different directions, so as to expose on all sides of the cornea as much of the ocular conjunctiva as possible. Any suspicious points should be probed gently to determine if the sclera has been penetrated. In the probing care should be taken not to penetrate the globe farther than is necessary to learn if the sclera has been punctured.

The patient is again told to look in different directions to note if the eye is restricted in any of its movements. If it has not the scope of movement of its fellow suspicion of paralysis of one or

more of the ocular muscles should be entertained, and attention directed to possible fracture of the apex of the orbit and to brain lesions.

The position of the eyeball in the orbit should be noted by comparing it with the fellow eye; for example, if the eye protrudes (exophthalmus), or recedes (enophthalmus), or if it is pushed away from its normal position in any direction. Any abnormal position of the eye should direct the attention of the surgeon to fracture of the orbit or hemorrhage into the orbit.

The pupil should be examined for its responsiveness to light and accommodation. Any interference with its activity or with the vision of the eye where no intraocular cause for the same is present, should cause suspicion of fracture of the apex of the orbit or of brain lesion.

To roughly determine the field of vision without the perimeter direct the patient to cover one eye and with the other look into your eyes. Now move your hand from below upward until he sees it; then from above downward, and laterally in the same manner. To discover whether his visual field is contracted, compare your own with his. If it is found that the visual field of each eye or of one eye is lost on one side, or that one quadrant of the field is blind, it means that the optic nerve has been injured somewhere in its course, or that a central brain lesion exists.

CHAPTER III.

Injuries to the Eyelids.

The injuries to which the eyelids are subject as a direct result of accidents

received in and about a mine, are from explosions, blows, falls, flying pieces of

rock and steel, and burns.

We will treat of all these injuries except burns under the one head of—

Direct Traumatism. Having obtained the history of the case, and inspected the part in accordance with the advice contained in the preceding chapter, and having made a thorough examination of the eyeball, the part is rendered as aseptic as possible, and all foreign substances are removed.

If the lids are much lacerated, but not penetrated by the wounds, and the free margins are in contact, the tissues should be moulded into position with the fingers and thin strips of cotton wet with 1-5000 bichloride solution are applied one over the other to the closed lids, until the depression between the nose and the eyebrow is filled to a level with the forehead. Over this place strips of isinglass plaster, allowing them to project over onto the nose, sides of the face and the forehead. This will hold the cotton firmly in position, so that there will be no slipping or displacement of the tissues beneath. A roller bandage may be placed over the whole if desired. This dressing should be left on for twenty-four hours, when it is to be removed and the part examined. It will be found that partial union of the lacerated tissues has taken place, and that swelling of the lids has in a large measure been prevented. The eye is freed from the accumulated secretion by gently wiping with pledgets of cotton wet with 1-5000 bi-chloride sol. These pledgets are squeezed between the fingers and thus freed from excess of the solution and moulded so that a sharp edge is formed, which will be easily in-

troduced between the lids to engage and remove the secretion from the eye. To separate the lids traction may be made below on the face, pulling down the lower lid, or above the eyebrow to pull up the upper lid. This separating the lids will facilitate the operation of wiping the eye free from secretion. The dressing as above described is again applied. This procedure is carried out daily until healing is well advanced, when the wet dressing can be replaced by a dry dressing of sterilized cotton. This should be continued until the lids are healed.

If the wounds of the lids are so extensive that the free margins of the lids are involved or the wounds gaping, or the attachments at the inner or outer canthus torn, it becomes necessary to coaptate the gaping or deeply wounded tissues, and to bring the line of union into as nearly perfect position as possible with fine silk sutures. It will be necessary to use very small full-curved needles. When the free margin of the lid is cut always place the first suture through the muco-cutaneous junction just to the inner side of the eyelashes, and see that no eyelashes are entangled in the wound. If they are annoying, pull them out with a pair of forceps; do not cut them off. The other sutures are placed along the line of the wound in the skin. Place them fairly deep, but do not tie them so tight that incurving of the skin will take place. If a portion of the lid is destroyed (and by destroyed is meant that it is hopelessly lost), turn a piece of skin in the form of a pedicle flap from the nearest available sound tissue to fill in the part, and suture in

position. The eyelids are of so much more importance than any of the adjoining parts that it is well always to preserve the integrity of the eyelids at the expense of a scar on the face.

It is hard to lay down hard and fast rules of procedure in plastic surgery. The mechanical ingenuity of the surgeon must help him out of such difficulties. We would suggest, however, that the endeavor should be to preserve as far as possible the cartilaginous portions of the lid as support for the skin flaps or grafts, and to avoid cicatricies about the lids, which as they contract will cause eversion or inversion of the lid margins. After plastic lid surgery, the dressings should be carried out in the same manner as for simple lid injuries, except that they should be wet with 1-10000 bi-chloride instead of 1-5000.

Burns of the Lids. Burns from black powder vary in their extent from a simple lodgment of a few grains of powder in the skin of the lids to their almost total destruction. Fortunately the patient, guided by instinct, closes the lids firmly at the flash of the explosion, and many times the lids sustain the brunt of the injury, the eyeball escaping to a large extent; but this does not always obtain, and we find many eyes totally destroyed from powder burns. When the eyeball is destroyed the eyelids are also usually extensively damaged, and when such is the case palliative measures in lid surgery are indicated. It is useless to institute extensive surgical interference for their preservation when the eyeball is lost. The exceptions to this rule would be when the fellow eye is in good condition, and when it is de-

sired to preserve the lids to enable the patient in the future to wear an artificial eye.

When black powder is imbedded in the skin prick each point with a needle and gently scrub the lid with a medium stiff toothbrush, and dress the lid in the manner described. It is surprising how powder grains can be removed from the skin by this scrubbing process. The sooner we see such a patient after the injury the easier it is to remove the powder.

Extensive powder burns, with bleeding and laceration of the lids from flying dirt and rock, may with great benefit be subjected to the same scrubbing operation.

Burns from *fire or hot water* demand protection from the air by the free use of sterilized olive oil applied on gauze and covered with oil silk or sheet rubber. As soon as granulation tissue begins to form its exuberant tendencies can be controlled by the application of pure carbolic acid, which is at once neutralized by applying pure alcohol. The acid and alcohol should be applied every few days, according to the indications, and as soon as the part begins to cicatrize small islands of skin may be transplanted upon it to prevent, as far as possible, extensive cicatricial contraction.

Deep burns of the eyelids usually result in great cicatricial deformity, in spite of all our efforts to prevent it, but the more tissue we save during the healing process the greater chance there is of improving the deformity by appropriate plastic operations.

Chemical burns are all to be neutralized at once, if possible, by the free use

of oil. It does not matter much what kind of oil it is so long as it is bland and clean. As soon as the case comes under the care of the surgeon he should render the part aseptic and continue the treatment as for burns from fire.

(To be continued.)

Address to the Graduating Classes of the Medical and Dental Departments of the University of Denver.

By H. G. WETHERILL, M. D.

Professor of Gynecology in the Denver College of Medicine, University of Denver, Denver, Colo.

Mr. Dean, Members of the Graduating Class of the Medical and Dental Departments of the University of Denver:

These exercises mark the end of an important period in your lives, and this night is an epoch toward which you have long and hopefully cast your eyes, and from which your career of largest usefulness to your fellow beings and the world will date.

On Friday, March 15th, 1878 (twenty-two years ago) one hundred and twenty-seven enthusiastic young men sat in the Academy of Music in the city of Philadelphia listening to words of counsel from the lips of an honored and beloved teacher. These men, of whom I was one, were going out into the world to heal the sick and minister to the afflicted, authorized by the great commonwealth of Pennsylvania through and by the authority of its venerable university. We were told of the progress of medical science, we were reminded of the unusual opportunities we had enjoyed during the two years just closed, and that our successors, who would have a three years' course, would far excel us in attainments if we failed to maintain habits of study, industry and so-

briety. We were reminded that we started upon a career as practitioners of medicine with a much better equipment for the work than did he who addressed us, and that every year in the future would send into the field better qualified men.

These words of my honored teacher, Professor William Goodell, recur to me on this occasion, and I cannot do better than pass them on to you as a legacy of wisdom and sound doctrine, impressing them upon you at the very end of the century and reminding you that they will hold good for transmission to your successors. Though you may not have enjoyed the facilities of a Pennsylvania, a Harvard, or a John Hopkins University, you have participated in and profited by the cumulative medical knowledge of nineteen hundred years of Christian civilization. You have enjoyed the advantages of four years' study of modern medicine under very favorable conditions, for it will be conceded that there are certain compensations in the smaller medical schools that fully make up for the superior clinical facilities of the larger, and you go forth into the world better equipped and with

a better foundation for your work than did that great man of his day, Professor Goodell, and you are as much better qualified for your life work than I was in March, 1878, as were the members of my class over our predecessors of twenty-five years before.

But the end is not yet. You may not rest upon your oars and feel that you are through with your student days, for in fairness to yourselves and to your prospective patients, you must feel that your studies have but just begun. Where should I be in the present race for medical supremacy with the bare equipment with which I left the University of Pennsylvania twenty-two years ago? Nowhere. I must know what modern medical science is teaching. I must keep abreast of the times, and if it be in me to advance the cause of medical science by some slight contribution on my part, I must be only too glad to do so in acknowledgement of, or partial compensation for, the vast store of medical lore so freely handed down to me. We have done our best for you. Your future is now in your own hands. In the name of humanity and in justice to your teachers, your alma mater and yourselves, make the most of it. Have high ideals and lofty ambitions, and so live that no pinnacle of your noble profession shall be impossible for you.

In speaking thus to you I have before me the fact that I am addressing the graduating class of the Dental Department of the University of Denver, as well as the medical graduates. Dentistry is a specialty of medicine requiring much medical knowledge and a peculiar manual dexterity. It is perhaps

more nearly on a true scientific basis than any other branch of medicine. Owing to certain features of the work it has become necessary to have some of its branches particularly taught in special schools, but the great principles of medicine apply to this special field, and that to which I shall allude applies particularly.

The advancing strides of the medical and surgical sciences, inclusive of dental surgery, have been great indeed during the past generation, and these advances have been made all along the line, but the greatest advance has been in prophylaxis, or preventive medicine, and I feel entirely safe in the assertion that the physician of the twentieth century will develop his preventive measure to the broadest proportions, though by so doing he destroys the source of his own income and finds it necessary to relegate his pukes and purges to the calm repose of innocuous desuetude.

The list of human diseases which we now know to be preventable grows day by day, and the methods of prevention, quarantine and immunizing more perfect. Going hand in hand with these potent preventive principles of modern medicine is an ever-growing tendency to employ more carefully considered and proved medical and surgical measures, and more rational conservatism is everywhere manifest. This conservative principle has been particularly applied to dental surgery, the wholesale sacrifice of nature's masticators for the insertion of "store teeth" having become almost a crime. The dental surgeon of to-day teaches his patient to prevent mouth diseases by proper prophylaxis

and to save, so long as possible, the more beautiful and useful mouth organs with which he has been endowed, for the modern dentist is a most skillful performer on these organs, and while he may make you dance to his tune, he rejuvenates your countenance, saves the charm of your smile and restores your digestion. You have nothing to do but pay the piper and look pleasant.

Prevention is the keynote of the present campaign against disease and death. It is the gift of the nineteenth century, which makes anything possible in the twentieth, for what may not be done in medicine, surgery and obstetrics with prevention and asepsis?

You think me picturing a vain ideal, and predicting the near approach of the millenium. Please do not so construe me. The good people of the twentieth century will still be open to the blandishment of the patent medicine fakir, and some even will adhere to the various pseudo-scientific religio-medical extravaganza. The physician whose field is the world and whose weapons may be evolved from anything in it, will still have ignorance and prejudice to combat along with disease. The dream of a Bellamy will not come true. Our city will not be a Utopia. The clergy will still hold their little differences of opinion about doctrine and the higher criticism. There will be factions and parties in matters of church and state, and the ward heeler, the boodler and the demagogue will still resist the progress of scientific sanitation, the protection of the people from quacks and the safeguarding of the young, the innocent and irresponsible from the frenzy of religio-

medical fanatics, and the rapacity of the gambler and the harlot. The wards of city, county and state in jails, almshouses, hospitals, asylums and prisons will be the natural prey of the political vultures, while you are cheerfully rendering these institutions and their inmates the best service of which you are capable for a meager compensation, or none at all. Such is twentieth century civilization and such is the life work you have chosen.

We most profoundly pity the misguided individuals who deny the existence of disease and death and refuse the benefits of vaccination and quarantine, but this may be one of Nature's methods of ultimately eliminating her degenerates, for she is ever partial and selective, and her weaklings go to the wall or become extinct. Her rule is that of the survival of the fittest. If the disciples of a profane, absurd and incoherent disbelief defy her and the laws of quarantine and self-preservation, and deify an impious, ignorant, mercenary imposter, who desecrates the holy name of Mother, they and their innocent children will pay the penalty with their lives. The sins of the fathers shall be visited upon the children we are told, and surely there can be no greater sin than this sacrilegious, irrational fanaticism. But the evil consequences do not stop here unfortunately, for to deny the existence of such diseases as measles, scarlet fever, small pox, typhoid fever and diphtheria, and to refuse to recognize them in their incipency is to expose your children and my friends, in schools and assembly halls, on the streets and in the cars to these deadly

scourges, against which sanitary science has so ably and effectively battled. Is this not a sin, and should it not be a crime before the law?

It is perhaps somewhat unusual for one to attribute the marvelous possibilities of the surgery of to-day, both dental and general, to the perfection of preventive measures, but it is chiefly to this great principle we owe our ability to obtain the marvelous results now so universally secured. These triumphs have become so much a matter of daily routine that we have ceased to marvel at them, and the antisepsis and asepsis of surgical technique for the exclusion of disease germs and the prevention of infection of wounds is as much a matter of routine as the selection of instruments for the operation. A clean field of operation, clean hands, boiled instruments and sterile dressings have revolutionized surgery; and have made the invasion of the cranial, pleural, pericardial and peritoneal cavities safely possible. Lives innumerable have been saved through the practical application of this principle of surgery and no organ of the human body is to-day exempt from invasion by the knife if there are diseased conditions in it demanding relief.

Prophylaxis, through asepsis, and more perfect differential diagnosis has made the surgery of to-day what it is and had the nineteenth century nothing else to boast in the science and art of medicine, these achievements alone would entitle the medical men of the world to the everlasting gratitude of the human family, the chief executive of the great State of Colorado to the contrary, notwithstanding.

As a student I witnessed the first attempts at a practical application of the preventive principle of the immortal Lister at the hands of that great surgeon, D. Hayes Agnew, who, with the sleeves of his frock coat turned back, operated in the midst of the carbolic acid spray, only to find ultimately that the spray was quite unnecessary and the frock coat must be cast aside. Thus through the various steps the process of evolution has gone on till the practical application of the method has resolved itself into the attainment of rigid asepsis—that is, the exclusion of germs.

You will be told that in this evolutionary process many errors have been committed and some false steps have had to be retraced. We answer, no great truth is evolved in a day. No perfection comes without labor and the lapse of time. It is human to err, and the man who never makes any mistakes never makes anything else either. Even politicians have been known to make mistakes.

I wish to remind you, graduates of the Medical Department, that you are assuming a grave responsibility. The lives of your patients and friends are in your hands. You are their confessors. You know their secrets. You know the skeleton in the family closet. Their reputations are often in your hands. Cultivate the ability to hold your tongue. Few men have talked themselves into a practice, and many have talked themselves out of one. Circumspection is to loquacity much better than the 16 to 1 ratio of silver to gold. Be charitable to the frailties and mistakes of your patients. Your first business is to heal and minister to the sick. If af-

terwards you can aid the cause of reform, you may do so.

We regret the absence of so many of your professors, who are attending a great Medical Convention in the city of Washington. I am empowered, however, to bid you all God speed, and extend to you the congratulations of the

whole Medical and Dental Faculty; moreover, we trust you may be successful beyond your greatest expectations—but above all, we hope you may do your life work with that lofty purpose which alone brings true happiness and a just reward.

SELECTED ARTICLES.

The Duty of State and Municipality in the Care of Pulmonary Tuberculosis Among the Poor.

By EDWARD O. OTIS, M. D., BOSTON, MASS.

That pulmonary tuberculosis is the most prevalent and destructive disease existing to-day is a fact proven by the mortality records of all countries and ever susceptible of proof from the yearly summary of deaths. Its mortality to the total mortality is as three to twenty-two, that is, it is the cause of about a seventh of all the deaths. It is almost universally present in all regions of the earth, independent of climate. It "goes almost everywhere that man goes, and is worse where human beings are crowded together." Three-fourths of all its victims are between fifteen and seventy years of age, the most valuable portion of a man's life.

It is a contagious or communicable disease and hence preventable.

It is curable; the most so in its inception; hence the supreme importance of early treatment.

It is a disease of slow progress, both in its advance and retrogression, and hence expensive to care for and treat; in consequence the poor are practically helpless, without aid, to obtain such

treatment as will afford them a fair opportunity of recovery, or proper care while they live, if curable.

The poor suffering from this disease are a constant menace to those immediately about them and the public, through their ignorance, carelessness and inability to properly dispose of the sputum by which the disease is communicated. The number of lives saved and restored to usefulness and remunerative occupations by proper treatment, as well as those preserved by the removal of the source of contagion will indirectly return a large, if not the entire, expense incurred in the treatment.

I think that all will agree with me in the truth of the above propositions.

On the grounds then of economy, prophylaxis, and humanity, treatment and care should be afforded the poor, suffering from consumption. The city and State have already assumed that it is their duty to provide treatment and care for the unfortunate poor, suffering from other diseases and defects. The latter, the State, has established insane

asylums, institutions for the idiotic and feeble-minded, the dipsomaniacs and inebriates, etc.; and the former the city affords in its hospitals, treatment for all other diseases and injuries. There remains the enormously large class of consumptives, for whom no adequate provision has been made; no general hospital can or ought to receive them in its wards on account of the possibility of infection. Those in the curable stage lose their chance of recovery for lack of proper treatment, and the incurable cases either have to go to the almshouse or die in wretched neglect.

The poor consumptive is equally as worthy as the poor person suffering from typhoid fever or appendicitis, for instance. It is not his fault or election that he has this terrible disease, but his misfortune; but while he sees his neighbor afflicted with other medical and surgical diseases, receiving the best of care and the most skillful medical and surgical attention, *he* dies in neglect, or is referred to the poor house. Why is this? Why is the public so tender and liberal towards every other kind of suffering and misfortune and apparently so callous and indifferent towards the consumptive, whose suffering probably equals, if not exceeds that of any other malady? And why, moreover, is it so regardless of its own danger from this contagious disease? The reasons for this attitude I think are several: The very prevalence of the disease and the consequent familiarity with it; the idea still largely held that consumption is incurable from the first, and nothing can avert the inevitable end; the slowness of its progress, and the ability of its

sufferers to keep about and exhibit to a degree the semblance of health until near the final denouement; ignorance still common of its communicability and the danger from the dried sputum.

The interval of the time between the infection and the development of the disease is often so long that the cause is forgotten when the effect appears. With the other contagious diseases the effect follows so closely upon the cause that the connection between them is evident. Moreover, it has not been until recently that we have investigated the subject of exposure to the disease, the old belief of inheritance having been accepted as a sufficient and satisfactory explanation of the cause.

That this point of view may be changed we must convince the public of the truth of the propositions enumerated at the beginning of this paper. Let me briefly repeat them:

First—Consumption is the most prevalent disease of modern times.

Second—It is very curable in the early stages, and may be arrested in any stage.

Third—A certain proportion of consumptives will not safely dispose of their sputum, and hence endanger the health of the community.

Fourth—The hopeless cases among the poor have no decent treatment or care, and must either die in abject neglect or go to the almshouse.

When the public awakes to a vivid realization of the truth of the above facts it will demand municipal and State aid in the care of the consumptive and for the protection of the community, and ask that a portion of the private

benefactions be applied to this object. A few suggestions as to some of the means we can employ in arousing the public to the point of action, before considering the best and most economical methods of providing this treatment and care for the consumptive, are submitted.

In the first place I would suggest that the crusade against consumption be made a popular one, even a fashionable one, if you will. In this respect follow the example of our European confreres. Let associations be formed similar to the admirable Pennsylvania Association for the Prevention of Tuberculosis, and have sections or local societies in various portions of the State; hold frequent public meetings with *laymen* of note and influence as sponsors and speakers; enlist the daily press, and have such meetings widely reported; let frequent articles appear in the papers upon the importance and urgency of the problem. In England, as you know, the daily press was a potent factor in arousing the interest and enthusiasm of the people. Local societies sprang up all over that country and money was contributed for prevention, and the erection of sanatoria for the open-air treatment; and the work is now in full progress. Once the public is thoroughly aroused it will quickly respond, the fearful will act from motives of self-protection, and the philanthropist from humane considerations.

I will now consider the best methods to advocate for the suppression of this disease and the treatment and care of those afflicted with it. In the solution of this problem we have the example and experience of Europe to aid us, to

which I shall refer later. Besides the educative efforts in the way of tracts and circulars by societies and boards of health regarding the danger from sputum and its avoidance; disinfection and renovation of abodes occupied by consumptives or in which a death from this disease has occurred; ordinances regarding the spitting nuisance in public conveyances and places of gathering; cuspidors conveniently placed in halls, shops, and wherever people may congregate; laws and ordinances regarding cattle, meat and milk inspection; the free examination of sputum; besides all this most important field of effort, there remains the greater and absolutely essential complement to it, namely, provision for the treatment, care and isolation of the poor consumptive, a task far too enormous for private or even municipal effort, but in which the aid of the State must be invoked. Indeed, assistance must be had from all three of these sources to accomplish this great undertaking.

Two sets of institutions in the writer's opinion will be required to best meet the requirements:

First. Consumptive hospitals in or near the cities for the reception of poor consumptives in all stages of the disease, erected and maintained by the municipality, as are now the city hospitals for other diseases. Undoubtedly, as with hospitals for other diseases there would be other such consumptive hospitals established and maintained by private charity. All the great London chest hospitals are so supported—but the initiative must come from the city, for the city or community has assumed

it as its duty, as I have said, to care properly for its own sick poor.

Second. Several State sanatoria more favorably situated climatically for the application of the open-air treatment, and not too far distant from the city which would furnish the majority of its clientele. From the city consumptive hospitals the more hopeful cases could be later transferred to such institutions, such sanatoria receiving only the incipient cases or those offering a fair prospect of arrest.

By consumptive hospitals, I do not mean asylums or homes where those afflicted with disease can comfortably die, but a place where curative treatment can be offered, so far as the conditions of location in or near a city will allow. The arbitrary division of the disease into curable and incurable classes is by no means always possible; many so-called incipient cases are hopeless from the first, while some in the advanced stages exhibit surprising arrests; therefore, I repeat, *hospitals* offering opportunities for treatment. Undoubtedly a large number of the inmates of such hospitals would prove to be incurable, and if they were all such these institutions would a thousand times justify their existence from the standpoint of prevention and humanity; but as in the German sanatoria where all stages of the disease are represented, some would so improve, or have their disease arrested as to be able to resume work again. In Dr. Turban's sanatorium at Davos, Switzerland, of those in the third or advanced stage, twenty-three and six-tenths per cent. were absolutely or relatively cured, and seventeen per cent. of

these were found to remain so when communicated with from one to seven years after leaving the sanatorium. Of course they had the exceptional advantage of the air of the Swiss altitudes, but fresh air is available everywhere. With many cases there would be no doubt as to which of the two classes of institutions they belonged before removing them from their homes. With others the decision could only be made after keeping them under observation for a time at the city institution.

The State sanatoria must, in the writer's opinion, be erected by State appropriation and at least partially maintained from the same source. A portion of the expense could be collected in some cases from the patient through his friends, or by private charity; or defrayed by the city or town from which he comes; this is practically the method pursued at the Rutland sanatorium in Massachusetts. Of course the entire maintenance could be provided for, by a *per capita* tax on the locality from which each patient comes, as suggested by the New York Board of Health, but, in the writer's opinion, a certain yearly appropriation should be made by the State if not directly for maintenance purposes, at least for investigations in bacteriology, pathology, and treatment of tuberculosis, which would not only indirectly benefit the State but the public generally. As a matter of fact the State and municipality have ultimately to provide for very many of its poor consumptives in its almshouses and other like institutions, and the expense now largely wasted by this unintelligent method, is probably as great, at least,

as it would be in the proposed consumptive hospitals which not only offer an asylum, but treatment and many other advantages. The outlay, then, would by no means be an entirely new and extra one, but only in another and more economic direction. Moreover, by reducing the number of consumptives by this enlightened method—as the London consumptive hospitals have proved is the case—there would result a yearly saving of lives whose labor has a money value to the community.

From the standpoint, then, of economy, public protection, humanity and precedent in establishing institutions and hospitals for other diseases, there is every good and solid reason why the city and State should appropriate some of their funds for this urgent and beneficent purpose. Knowledge ever brings responsibility. We *know* through Koch's immortal discovery that tuberculosis is contagious. We are, therefore, responsible for the protection of the helpless and ignorant from its infection, and further we are responsible for the poor and homeless consumptive who, through the knowledge of its communicability is kept out of the general hospitals.

In the meantime, pending the moving of public opinion—always slow—towards this object, the expediency of setting apart wards in some of the general hospitals for the exclusive occupancy of consumptives is to be considered, as has been determined upon in some of the Paris hospitals.

As to the expense of maintenance in such hospitals and sanatoria it would probably be about the same, or perhaps a little more than in our general ones,

from \$350 to \$450 per capita a year. At the Massachusetts State Sanatorium it is a little over \$400 (\$436.80). At a recent discussion in Philadelphia, various authorities estimated the cost as between three hundred and fifty and five hundred dollars per capita per year. In Germany it is about \$275 a year.

As to the locations for the State sanatoria, others can speak from more intimate knowledge of the climatic and topographical conditions of the State than I can do. Sullivan county and the Adirondack region have already proved their eligibility, and undoubtedly favorable sites could be found in the western and central portions of the State. The main requisites are pure air, free from dust and smoke, protection from winds, and sunshine. "I can cure consumption in any climate where there is pure air," said Dettweiler, the great phthisio-therapeutist, to me once.

In a recent communication to one of the medical journals by a physician of this State*, the writer opposes State sanatoria because he says "competent authorities assert that a majority of the incipient cases recover when *properly* treated at home." Proper treatment cannot be obtained at home in the wretched environment of the poor; even the well-to-do cannot obtain such favorable conditions as are afforded by a sanatorium. The modern treatment of consumption is an exacting, long and expensive one, demanding absolute control and constant supervision of the patient, together with such opportunities for constant exposure to fresh air, rest, and abundant and properly prepared food as only a sanatorium can best furnish.

It is utterly hopeless to think of obtaining such conditions of treatment in the homes of the poor, which is an irrefutable argument for State sanatoria.

In locating the consumptive hospitals in or near the cities, some opposition is to be expected from the neighboring land owners, both from the mistaken fear of contagion and the selfish one of a depreciation of real estate. We have had the experience in Boston, but the greater public good will overrule all this.

It will be encouraging to see for a moment what has and is being done in Europe in the establishment of sanatoria for poor consumptives. Hardly a single European country is without one or more consumptive hospital or sanatorium.

Germany takes the lead with from thirty to fifty. In Russia the Czar donated \$300,000 and a large tract of land at Taitzi, about twenty-five miles from St. Petersburg, for a sanatorium, and it is already established. Eight others for the poor are also in operation there. In Sweden the king has given over half a million dollars for the same purpose, and three sanatoria will soon be completed. In Norway a leper hospital near Moelde has been transformed into a consumptive one, and soon another of eighty beds will be constructed at Lysterfjord. Switzerland has four for the poor and others projected; Austria a free one of 300 beds; France has several proposed and under construction, and three of the Paris hospitals have set apart certain wards for the reception of phthisical patients, and 6,000,000 francs have been voted for the construc-

tion of new wards for the same purpose at other hospitals; Denmark, Holland, Belgium, Hungary, Bulgaria, Roumania and other countries have associations for the erection of sanatoria for poor consumptives, and Spain is said to be about to erect two. England has seventeen hospitals, homes and sanatoria for consumptives, free or partially free.

With the present activity in this direction it would seem that in a decade or two consumptive hospitals and sanatoria would be established all over Europe, just as leper houses existed in the middle ages; and it is no fancy to believe that as with leprosy—a disease closely allied to tuberculosis—this disease also may become eventually well nigh exterminated. Shall not we in America follow the example so nobly set us by Europe? Our need is as great and the remedy is plain. I feel sure that before many more years we shall see consumptive hospitals and sanatoria arising in all our large cities and in suitable localities in the State, and in consequence the present appalling mortality from this preventable disease rapidly and steadily diminishing. How soon this devoutly desired consummation shall be accomplished will depend largely upon the medical profession, which must always take the initiative in matters of prophylaxis and public health. It is the physician to whom we must look for the creation of an enlightened public sentiment, and it is a pity that so many of the profession are still apathetic upon this question. As Dr. Reron truly remarks, "For any one wilfully to hinder, even by his indifference to the subject, any reasonable attempt to lessen this

scourge of our race is to take upon himself a very grave responsibility."

THE ESTABLISHMENT OF THE STATE CONSUMPTIVE HOSPITAL IN MASSACHUSETTS.

A young physician beginning practice in a portion of Boston largely inhabited by the poor and working people, was impressed with the number and helplessness of consumptives among his clientage. "If there was only some special hospital," he said to himself, "where these poor sufferers could obtain proper care and treatment, for the general hospital will not receive them." This thought led to the idea of a State institution of this nature, and happening to have a brother in the legislature at that time, he discussed the matter with him, and the result of his discussion was a bill presented by the brother for the establishment of a "Hospital for Consumptives and Tubercular Patients," as it was called. This bill, introduced January 30, 1895, was referred to the committee upon "Public Health," who unanimously reported that it "ought not to pass." But the keen legislator did not allow his bill to die in this way; through his exertions the report was negatived, and the bill referred to the committee upon finance. At a hearing of this committee, Dr. Knight and others appeared in its favor, and impressed with the need of such a hospital, the committee reported unanimously for it and for an appropriation of \$150,000. On May 28, it was read a second time and ordered to a third reading, and finally enacted on June 5, 1895. In the Senate, the committee on the treasury, to which it was referred, recommended that it be left to the next legislature, and

this recommendation was adopted. Subsequently at the instance of Senator William H. McMorrow, who, by the irony of fate, afterwards died himself of consumption, the bill was reconsidered and passed by a majority of two votes.

According to its provisions a board of five trustees was appointed by the Governor to select a location, build the hospital, and take charge of it. A circular letter of inquiry was sent to all the registered physicians in the State, inviting their opinion as to the most eligible location. Rutland, 1,600 feet above sea-level and at almost the geographical center of the State, was finally selected and the hospital built, costing with the land somewhat more than the appropriation, the deficit being made good by a subsequent legislature. On October 1, 1898, the hospital was open for the reception of patients, and in the following February it was full—200 beds. There was nothing in the act establishing the hospital defining the purpose of the institution, as to what class of cases should be received. After careful consideration the trustees decided that only those in the early stages of the disease, or who gave promise of arrest or cure should be admitted. It was considered more peculiarly the province of the cities and towns to provide consumptive hospitals—such as have been described in this paper—for the reception of all stages of the disease. The medical management is in the hands of two paid visiting physicians, one a homœopathist and the other a general practitioner, who reside in Boston—fifty or more miles distant—and make weekly visits to the hospi-

tal. There are also two house physicians and a superintendent, also a physician who has charge of the administrative details of the hospital, and is the treasurer. Patients are admitted only upon the recommendation of the visiting physicians, and apply either at their office in Boston or at the hospital. They can choose the school of practice under which they desire to be treated. Graduate nurses only are employed to whom a post graduate course is given in the special nursing of tuberculous patients.—Albany Medical Annals.

RATS AS PLAGUE DISSEMINATORS.

The State Board of Health has issued a circular on the subject of rats as carriers of bubonic plague germs. The matter contained in the circular consists of a series of questions propounded by the secretary of the Louisiana State Board of Health to Dr. Walter Wyman, surgeon general of the marine hospital service, who answers them very carefully and thoroughly:

The questions presented are as follows:

1. Can rats carry the plague without being affected with it?
2. Can they carry the live germs in their fur?
3. How long?
4. Can they have bacilli in their feces without having the plague?
5. Can they carry fleas infected with bacilli without having the plague themselves?

The replies are appended:

Replying to your inquiries of March 20, concerning plague, I have to say:

1. That as far as known rats do carry the plague without being affected with it.

2. It is possible to conceive that the germ may be in the fur of a rat and the animal not be sick with the disease. But it is probable that a rat would soon infect itself from this source, on account of their habit of dressing their fur.

3. The viability of the plague bacillus outside the body is a disputed question. The German plague commission states that the organism will dry out and die in four days. According to experiments in the hygienic laboratory of this service, the bacillus of plague has been found alive after twenty-one days on a piece of fabric, dried and kept in a cool, dark place. Further work on this line is being carried on.

4. According to the work of Batzuroff, rats are infected when fed with plague cultures. It is not likely that the organisms live in the intestinal canal of a healthy rat.

5. It is not positively known that fleas infected with plague may live in a healthy rat without infecting it. In our hygienic laboratory, fleas from plague-sick guinea pigs were found to carry the plague bacillus in virulent form.

William G. McCall, who was one of the first white children born in Denver, died recently at his home, 2125 Welton street, of consumption. He was 38 years of age and had lived all his life in Colorado. His father was one of the early emigrants to this State, being now at Creede, and his sister, formerly Jennie McCall, was the first white child born in this section of the country.

THE COLORADO MEDICAL JOURNAL

AND

WESTERN MEDICAL AND SURGICAL GAZETTE.

A Monthly Journal for the Medical Profession of Colorado and Adjoining States.

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EDITORIALS.

THE COLORADO STATE MEDICAL SOCIETY.

The preparations for the meeting to be held in Denver June 19, 20 and 21 are well under way. The sessions will probably be the most interesting in all respects held for years, and it is hoped that the members of the profession throughout the State will find it possible to attend the sessions and partake of the feasts, intellectual, gastronomic and of other kinds, which will be spread out for their delectation.

The following items on the program are deserving of special mention: Dr. C. K. Mills of Philadelphia will give an address on some medico-legal subject.

This will be of special interest to the general practitioner. Dr. Charles B. Nancrede, professor of surgery at Ann Arbor, Mich., will give the address on surgery. Dr. V. P. Gibney of New York will give a clinic on orthopaedic surgery, as will also Dr. Phelps, probably.

Then there will be a symposium; not an ordinary symposium, but an unusual one. The subject will be syphilis, and every doctor who sees or ever expects to see any cases of this protean disease will find more profit in this one part of the program than will suffice to repay him for all time, effort, and expense incurred in attending the entire meeting. Twenty-two general and special practitioners

of recognized ability will take up the consideration of the various manifestations of this most picturesque affection. To enumerate all the subjects and those who will elucidate them would require too much space, and to select a portion for special mention would be to indulge in unjust and invidious comparisons. The titles of the following papers have been received:

"Helps in Refraction," by Melville Black, M. D., of Denver.

"The Rational Treatment of Abortion in Country Practice," by J. W. Cline, M. D., Georgetown.

"A Contribution to the Study of Pathological Conditions Caused by the Yeast Fungus," by C. G. Hickey, M. D., of Denver.

"The Symptoms, Prognosis and Treatment of Gastric Ulcer," by W. T. Little, M. D., of Canon City.

"The Relations of State and Local Boards of Health to Diphtheria Outbreaks," by George E. Tyler, M. D., of Denver.

"The Influence of Myth and Superstition on the Science of Medicine," by W. W. Reed, M. D., of Fowler.

"The Digestive Disturbances of Pulmonary Tuberculosis, Their Causes and Importance," by C. B. Van Zant, M. D., of Denver.

"Degenerative Results of Defective Heredity," by Charles Denison, M. D., of Denver.

Also most interesting papers have been promised by Drs. Henry Sewall, C. D. Spivak, Herbert Whitney and others.

As mentioned in a former number, an exhibit of histological, pathological,

bacteriological and chemical specimens and apparatus, photographs, photomicrographs, and skiagraphs is being prepared. It is hoped that as many physicians as possible will contribute toward making this a brilliant success by sending interesting specimens or photographs of interesting cases to Dr. Wm. M. Beggs, Physicians' building, Denver, in time for proper arrangement in the exhibit.

The intellectual feast, however, will not be all that will be provided. Special stress is being laid on the social entertainment of the visiting members, and the fact that such men as Drs. Grant, Hershey and Hopkins are taking this in hand will ensure due prominence and brilliant success to that feature of the meeting. Preparations are sufficiently under way to enable it to be said that in its characteristics the social entertainment will differ from anything hitherto offered.

All the members of the profession in the State are more than cordially invited to lay aside their cares and share in the general good time.

PHARMACEUTICAL POLITICS IN THE AMERICAN MEDICAL ASSOCIATION.

One of our advertisers writes us that they have received the following telegram from a leading chemical house in New York:

"We learn from good authority that the foreign chemical houses will attempt to elect their allies as chairman and members section on Materia Medica of the American Medical Association at the Atlantic City meeting. Many good men

are with them, without realizing the underhanded scheme; which is to discard American products and endorse only foreign. We should expose the plot with all possible haste by communicating with every medical journal in which we and other American houses carry advertisements, and ask their co-operation."

A number of our advertisers have written us in regard to the matter. In a body the size of the American Medical Association, no matter what the purpose of the organization, politics in some form or other is always springing up. It is absolutely impossible to prevent it, and is, perhaps, not an unmitigated evil because it finally results in a discussion and publication of the issues thus attempted to be settled.

It is sincerely to be hoped that this is a false alarm, and yet, when financial and economical advantages are at stake it is impossible to determine in advance to what lengths some interests, either singly or by organized efforts, will go. It would be a great misfortune were the elections of a section of the American Medical Association to be dominated by manufacturing pharmacists, either American or foreign; and if the scheme thus foreshadowed were to be carried out it would be a disgrace. The endorsement or condemnation of therapeutic products should be actuated by their therapeutic value only, and not by nationality or location of production. All honest men will agree to the justness of this standard, and dishonest men, if such should make themselves evident, should receive the well merited rebuke so indignantly administered that the

lesson would long be remembered.

Should the question of nationality enter into consideration at all, it should certainly be promulgated that, other things being equal, our favors should be given to our own. Americans should patronize and favor Americans. They owe in an overwhelming degree the most of what they are, what they have developed into, and the advantages and blessings which they enjoy to their fellow countrymen, and self interest, if no nobler motive should, in no doubtful words, admonish them to throw their influence in the direction of building up their own.

In view of the promulgation of this scheme, every delegate, and in the delegates lies all power, should be alert for any manifestations of commercial power and influence being brought to bear at the Atlantic City meeting, and use his influence to purge the society of such taint. The membership and candidates for office in the section should be closely scrutinized, and if such a scheme should be set in motion the rebuke should be immediate and crushing.

DENVER AND ITS CONSUMPTIVES.

Much has been written on the spread of infection of consumption in Denver without causing much alarm to the resident physicians, and a few suggestions may be well received as to the part every doctor should play in attempting to suppress as far as possible, the continued dissemination of the disease.

History repeats itself in every line in which the human race has been interested. Northern Italy and Switzerland

for years were considered to possess immunity to tuberculosis. Every continental physician ordered his consumptive patients to reside in these countries, expecting a cure for the individuals, but never considering the cost to the healthy resident. The result is, that the mortality of Italy and Southern France has shown of late years a marked increase in the number of deaths due to tuberculosis. This refers to the permanent inhabitant, not the health seeker. California is undergoing a similar scourge from the same infection. Various health resorts in the Eastern and Southern States note a like advance of the disease in the local residents. Denver has had nearly one hundred cases contracted within the environs of its city limits this past year. The source of infection has not been ascribed to houses or hotels, but rather to the general expectoration which every consumptive willfully indulges in.

The city ordinance has required placards to be posted in conspicuous places to advertise the danger to the healthy public of precarious expectoration on the part of the invalid. So far little attention has been given to these public requests. In the Tramway, "Do not spit on the floor" stares each person in the face, yet the consumptive enters the closed portion of the car, which is heated during the cold weather, and unhesitatingly expectorates on the floor, as if in derision of the Tramway's sign; that the Tramway is seriously at fault in permitting criminal negligence on the part of the conductor in not refusing to carry one who violates this law of its corporation, is self evident. The sputa

soon dries in a warm atmosphere, the continual rubbing and grinding of the dirt on the floor by passengers entering and leaving the car quickly pulverize the dried expectoration, making it an easy matter to inhale the germ-laden dust. Public buildings, churches and theaters alike present a continued source of infection to the healthy visitor.

How can this danger be greatly reduced? If each and every physician will maintain his allegiance to his Hippocratic oath and warn every patient of the danger of promiscuous expectoration, requesting that the sputum be collected in a handkerchief to be subsequently burned, this would greatly aid public sanitation and more good would be the outcome to the general public, than could ever accrue from severe medical legislation.

NO WONDER THEY FLED.

An authority upon chemistry was lecturing before a well-known woman's club and illustrating his remarks with experiments. All went well until he paused a moment and then said: "I'm very sorry, but I must ask any of the ladies who use face powder containing bismuth to leave the room during this experiment, as the gases I am about to set free have a peculiar affinity for bismuth and turn it purple."

Whereupon the entire audience save three courageous sisters rose and fled from the room.—St. Paul Globe.

The surgeons claim to have discovered a well-formed tooth in a Boston woman's heel, but they may be mistaken. It may be an ossified bean.

The Denver Clinical Society.

This report appears in no other medical journal.

A regular meeting of the Denver Clinical Society was held Tuesday, May 15, at 324 McPhee building. Those present were Drs. Tele, Bates, Root, Hoffman, Chandler, Goodman, Gale, Kapp and Mitchell and Miss Garrett.

Dr. Tele read an interesting paper on Heredity, dealing with the theories of cell transmission of characteristics, and in a general way of the problems these transmissions call forth. A very animated general discussion followed in which many pet theories were announced as being held by their owners until they should be knocked over by further consideration of the subject; many having already suffered such a fate.

A paper was then read by the secretary from Dr. Jennie Bailey of Florence, Colo., a corresponding member, containing among other items a report of a case of aggravated purpura and one of probable elephantiasis. A vote of thanks was moved to Dr. Bailey for her interesting paper.

It was proposed to have an extra meeting for social purposes only on Tuesday, May 29, the arranging of the programme to be in charge of the Executive Committee. The society adjourned at 10:30.

E. R. MITCHELL,
Secretary.

Denver and Arapahoe Medical Society Meetings.

This report appears in no other medical journal.

A regular meeting of the Denver and Arapahoe Medical Society was held at the Brown Palace May 8, 1900, President Fleming in the chair.

The minutes of the last meeting were read and approved.

Dr. William P. Munn gave an address on "Diseases of the Bladder and Their Diagnoses."

Dr. S. D. Van Meter read the paper of the evening, "Evasions of the Colorado Medical Statute."

The discussion was opened by Dr. Alfred Mann, followed by Dr. Frank Du-

lin, Dr. J. N. Hall, Dr. Wetherill and Dr. Spivak, and was closed by Dr. Van Meter.

The president announced the following Committee on the "Dead Beat" question: Drs. Beggs, Mann and Blaine.

On testing sight and hearing of children in the public schools of the city of Denver: Drs. Eskredge, Levy, Coover, Black, Chase and Jackson.

There being no further business the society adjourned.

C. P. CONROY, Secretary.

The Denver Clinical and Pathological Society.

This report appears in no other medical journal.

The Denver Clinical and Pathological Society met at the Stedman building the evening of April 13, 1900, the entertaining members being Drs. Packard, Perkins, Pershing and Powers. Twenty-nine members and five visitors were present.

The Membership Committee recommended Dr. William Fenn for honorary membership, which was unanimously agreed upon.

Dr. Gallaher proposed the following amendment to Art. II., Sec. 2, of the constitution: Add the words "And it shall be the duty of said committee to notify each member of the society, through the secretary, of every application for membership before the next regular meeting following application." In accordance with the by-laws of the Society its consideration was deferred to the next regular meeting.

No patient was presented.

Dr. Van Zandt exhibited a specimen showing torsion of the umbilical cord. Discussed by Drs. Hill and Bergtold.

Dr. Waxham reported a case of mammonitis following use of a bust developer in a boy of sixteen. He also reported a modification of Gleason's operation for deviated septum. Discussed by Drs. Gallaher and Levy.

Dr. Powers reported a case of transition of a labial papilloma to an epithelioma. Discussed by Dr. Edson.

Dr. Levy reported a case of sepsis following operation on the inferior turbinated. Discussed by Drs. Waxham and Gallaher.

Dr. Bergtold reported (1) a sinus of the cervical region, due to a carious tooth (t), and (2) a right-sided pyelitis.

Dr. Kenney reported a case of amental adeno-sarcoma. Discussed by Drs. Powers, Freeman and Whitney.

Dr. Stover asked for information as to the effect of repeated applications of adrenal extract on vascular hypertrophies. Discussed by Drs. Levy, Gallaher, Whitney, Waxham and Van Zandt.

Dr. Tyler reported a case of dilated stomach following an operation for gastro-enterostomy. Discussed by Drs. Freeman and Hall.

Adjourned.

G. E. TYLER, Secretary.

BILL'S BRAINS.

Bill Fletcher, a lineman for the Michigan Telephone Company, doesn't like to wear a hat on hot days. A kind-hearted old lady saw Bill one hot day near Saline digging away bareheaded at a posthole. So she went into the house and got one of her husband's old hats. "It's too bad you haven't got a hat; take this one," said she; and, not wishing to offend her, Bill accepted the proffer. When the job was completed he went to the door, and, thanking her, said that he could not keep the hat. "But you must keep it," she said. "You will bake your brains out if you don't wear something over your head this hot weather." "Oh, no, I won't," said Bill. "I haven't got any brains. If I had I wouldn't be digging postholes."—Criterion.

COLLEGE NOTES.

THE DENVER COLLEGE OF MEDICINE.

By ALLISON DRAKE, Ph. D.

At Trinity M. E. church on the evening of the 30th of April, the medical and dental departments of the University of Denver conjointly held their commencement exercises. The house was well filled with friends of those about to graduate, and the pulpit was massed with floral tributes. Professor Edmund C. Rivers, dean of the Faculty of Medicine, presided, and Professor Horace G. Wetherill, secretary of the Faculty of Medicine, delivered a well-advised address to the graduating classes. Professor Wetherill particularly and wisely sought to impress upon the members of the class graduating in medicine that if they were to enter and keep in the van of the medical profession, they must regard their student life as only begun. Knowledge has in recent years been increasing steadily in geometrical ratios in all departments of learning, but in medicine it is most strikingly true that

"In life's lengthened alphabet what
used to be

To our sires X Y Z is to us A B C."

The members of the class graduating in medicine appeared in cap and gown. There is something very fitting in wearing on such occasions these trappings of the times when habiliments and ceremonies were the most distinctive, not to say the only, marks of learning. It may be necessary to cast aside much of the supposed wisdom of former ages, yet we can very properly pay our respects to

the early searchers for scientific truth by adopting in part the vestments and ceremonies with which they sought to distinguish it.

Chancellor Buchtel was to be present, but was suddenly taken ill on the afternoon preceding commencement, and Vice-Chancellor Herbert A. Howe, professor of astronomy and director of the Chamberlin observatory, admirably filled the chancellor's engagement, though instead of delivering an address he merely remarked that he would not, by attempting to make a speech, add to our regret at not hearing an address from the chancellor, which modest statement gave us assurance that the vice-chancellor was amply able with discourse to entertain and to edify us indefinitely. Vice-Chancellor Howe also omitted the benediction, greatly to our disappointment, for assuredly no one ought to be able more worthily to pronounce the benediction than he who for years has habitually passed his nights in the heavens.

Dr. Charles W. Stewart, B. S., received the prize, consisting of a case of surgical instruments, offered by Professor Alfred E. Seebass for the highest general average in the final examinations. Dr. E. L. Williamson was awarded the second prize in the same contest, given by William H. Lauth, for the highest average and unusual excellence in surgery. Dr. Horace S. Cooper, B.

A., house physician at St. Luke's hospital, received a pocket case of surgical instruments given by the J. Durbin Surgical and Dental Supply Co.

Dr. W. C. Bane offered a prize for the best case-record of his clinical lectures; this prize was awarded to Dr. Charles W. Stewart, B. S.

The junior annual, entitled "Kynewisbok, Vol. III," made its appearance near the end of April, a little late for satisfactory distribution among the students of the medical and dental colleges. The pretty volume is unique in many ways, and is truly a "Royal Book of Wisdom," as its name implies. Miss Ethel Antrim, a junior student of the College of Liberal Arts, beautified the volume with many original designs in caricature and otherwise. Mr. Elmo A. Hall, who is a junior medical student of exceptional merit, weirdly adorned with native art the section of Kynewisbok devoted to the College of Medicine.

The class histories in the annual are very brief, but for the most part are individually to the point. The editors kept in mind Cæsar's philosophic observation that "Almost cheerfully men believe what they wish," and felt little doubt of the expediency of inserting lines that were possibly ambiguous, thinking that the most favorable construction would prevail in cases of doubt. But great is the perversity of human nature at times, and we learn that one proud youth took on a wry countenance because it was said: "His house was known to all the vagrant train." Some of his fellow students, however, bade him be of good cheer, as the probable meaning was that the poor when ahungred sought his house not in vain, and that when they were athirst, he gave them a drink! Whereupon the noble youth was seen to smile and smile again.

THE GROSS MEDICAL COLLEGE.

The commencement exercises of the Gross Medical College were held at the Broadway theater Thursday evening, April 26.

The auditorium of the theater was filled by the admiring friends and relatives of the graduates. Potted plants adorned the corners of the stage, while the center thereof was graced by the members of the college faculty, the participants in the programme and the young men and women in caps and gown.

Rev. William T. Jordan, pastor of Calvary Baptist church, pronounced the

invocation and he was succeeded upon the platform by Rabbi W. S. Friedman, who spoke in his masterly way upon the struggles and duties of the physician as a scientist, laying special stress upon the opportunities that afford for original work in Colorado.

Dr. W. H. Buchtel conferred the diplomas upon the twenty-two students. Dr. William P. Munn then talked to the graduates upon the physicians' code of ethics, showing that there was a certain morality peculiar to the profession that should be practiced, aside from the ministrations of medicine.

Prizes were awarded as follows: General average, first, Albert Silverstein; second, Claude E. Cooper; gynecological, William H. Rothwell; best general average in medicine, Claude E. Cooper; Dr. Buchtel's prize, \$50 each to William H. Rothwell and Albert Silverstein for best work in obstetrics.

Following are the graduates: Andreas Anderson, Claude E. Cooper, William Drechsler, Harry C. Dyer, Theresa S. Fantz, Ernest H. Hawkins, Perry Jaffa, Levi E. Kindig, Rudolph Manns, George A. Moleen, George W. Morse, Richard A. Pearse, Charles O. Petty,

Augusta M. Rothwell, Wm. H. Rothwell, Richard Russell, Albert Silverstein, Warren H. Twining, Christian I. Vedeler, Mary Z. Vermeiren, Letitia Wiseman and Jesse C. Woodward.

Just 110 seats were occupied at the banquet table at the Windsor, where the faculty tendered a dinner to the graduating class. Dr. T. H. Hawkins was toastmaster. The toasts were: "Gross Medical College," Judge C. P. Butler; "Faculty," Dr. John Elsner; "Graduating Class," Dr. W. H. Rothwell, president; "Undergraduates," C. H. Ferria.

THE COLORADO COLLEGE OF DENTAL SURGERY.

The third annual commencement was held in the ordinary of the Brown Palace hotel Wednesday evening, April 25. The programme consisted of: Music, college quartet; opening address, Dr. W. T. Chambers, dean; address, Dr. Robert Levy; vocal solo, A. A. Wallace; valedictory, L. A. Walker; conferring of degrees by the president, Dr. H. A. Fynn; music, college quartet.

The graduates were as follows: Grant Seeley, David Hopkins, Edgar A. Scholabach, James S. Dean, Louis A. Walker, Asa A. Wallace and Hjalmar A. Elmquist, Denver; Thomas J. Bovard,

Evans; Willard E. Sanderson, Berthoud; Roy H. Culver, Kansas City, and Albert E. Goodwin, Wisconsin.

At the close of the commencement exercises all adjourned to the dining rooms of the Brown, where a banquet was served and toasts were drunk and responded to as follows: "Our College," Dr. M. S. Fraser; "The Class of 1900," Dr. J. S. Dean; "The Alumni," Dr. H. F. Hoffman; "The Faculty," Dr. David Hopkins; "The Patients," Dr. F. P. Tuxbury; "The Juniors," E. P. Lewis, '01. The toastmaster was Dr. H. W. McLauthlin.

A Philadelphia man wishes to sell the artificial leg of his wife's first husband, which was bequeathed to him by that gentleman. Wouldn't that cork you?

The latest operation in surgery is called hepaticocholecystastteosistomy. A man who could survive such a thing as that would have something worth leaving to his posterity.

FROM OUR EXCHANGES.

The Thermometer as a Germ Carrier.

W. L. Conklin examined six thermometers for bacteria. Four had been washed, but not sterilized. Micro-organisms of one or another variety were found on each of the four. Two had been washed and then placed in a case containing bichloride solution. No micro-organisms were found on either. The author urges the necessity of a more thorough cleansing of thermometers, and describes the case which he fills with a 1:500 or 1:250 bichloride solution, in which he keeps his thermometer. —Buffalo Medical Journal, February, 1900.



Transplantation of Tendons.

At a recent meeting of the Section of Orthopædic Surgery of the New York Academy of Medicine, W. R. Townsend, M. D., presented a boy, fourteen years old, on whom he had operated for relief of disability of the hand, accompanying right hemiplegia, the result of cerebral palsy in infancy. The right heel cord had been cut several years before. He had never had useful control of the right hand, which was a typical claw hand. The fingers were flexed on the palm, with slight ability to extend, and the hand was slightly flexed so that its dorsum was nearly at a right angle with the forearm, with no ability to extend the wrist. The fingers had no

power to grasp on account of the position in which the hand was held. The object of the operation was to correct the flexion at the wrist and restore the power of grasping to the fingers, by shortening the extensor tendons and attaching to them the cut ends of certain flexor tendons passed through the space between the radius and ulna.

On Dec. 21st, 1899, through an incision on the flexor surface of the wrist, the tendons of the flexor carpi radialis, the flexor carpi ulnaris and the palmaris longus were divided by scissors just above the annular ligament, and silk threads were stitched to the ends to prevent their withdrawal upward out of reach. The tendon of the extensor communis digitorum was then exposed about one and one-half inch above the wrist by an incision on the dorsal surface. It was folded on itself twice, to shorten it, and between the folds the cut ends of the flexor tendons passed through from the flexor surface, were attached by catgut stitches. The wounds healed per primam, except at one little spot, which closed in ten days. The fingers were kept extended in splints for six weeks to insure union of the tendons. The result has been a hand held perfectly straight in a position of extension with power to extend and flex through an arc of about twenty degrees, and the restoration of a fair grasp to the fingers, a condition subject to probable improvement by use, massage and electricity.—Med. R. of R.

**Perforating
Duodenal
Ulcers.**

Robert T. Wier, M. D., reviews at length in the Medical Record for May "Perforating Duodenal Ulcers."

"The interest that has been lately directed toward the surgical treatment of gastric perforations has also been turned to the operative relief of the allied round or peptic ulcer of the duodenum. This affection is much rarer than the ulcer of the stomach, is much more difficult to diagnose properly, and is more apt to be confounded with other more distant surgical lesions, such as appendicitis, etc.

Diagnosis. The following contrasting symptoms have been grouped by Vonroyl as an aid to this end: Gastric ulcer: (1) More frequent in women, twenty-fifth to fiftieth year. (2) Pain promptly after eating. (3) Relieved by vomiting. (4) Frequent biliary mucous and food vomiting. (5) Marked dyspeptic symptoms. (6) Frequent bloody vomiting. (7) More seldom bloody stools.

Duodenal Ulcer: (1) Occurs most frequently in males. (2) Pain in right hypochondrium or to right of parasternal line. (3) Comes on two or four hours after meals. (4) No relief by vomiting; latter not frequent. (5) Bloody stools (melaena or bright blood) more common than bloody vomiting. (6) If jaundice is present this would contribute to the diagnosis.

Great pain is usually felt at the epigastrium or to the right of this region, as was noted twenty-six times in forty-seven of my cases. It has a few times been observed at the umbilicus and in

the left side, but in twenty-three others of the forty-seven instances, it was simply recorded as abdominal pain. Vomiting often follows the attack of pain. It occurred in twenty-eight out of thirty-four instances. Shock is not often met with, but may be severe and fatal. Peritoneal symptoms rapidly develop with a tendency in some cases to be localized in the upper part of the abdominal cavity and in the right side; when these signs show themselves mostly to the right and at or below the level of the umbilicus, an appendicitis is necessarily simulated. When the liver dullness has been dissipated up nearly to the mammary line, air extravasation may be suspected, and when accepted as present it will aid in confirming the diagnosis. This symptom of liver resonance, unless marked, is so often found to be due to a distended colon that it should not be much relied on.

When the diagnosis has happily been narrowed down to a perforation of either the stomach, duodenum, or gall bladder, the incision to be advised is in or along the edge of the rectus muscle, four to six inches in length, and starting rather low down on the abdominal wall, so as not to reach much above the liver edge, but to extend far enough downward to get easily below the transverse colon, which might be necessary. Supplementing this incision in its upper third another transverse one in the skin to the left or toward the median line is advisable. This will permit the cross division of the fascia covering the right rectus muscle, which latter is in turn to be pulled to the left, when its posterior sheath with the peritoneum is

also to be divided. This gives a satisfactory and largely increased exposure of the parts beneath, and the subsequent suture of the upper and lower sheath of the rectus with the full replacement of the muscle adequately restores the integrity of the abdominal wall. This incision I have made many times in operations on the gall bladder, and similarly in numerous instances of suppurating appendicitis when increased space is necessary.

♥♥

Management of the Hair During and After Fevers. George T. Jackson, M. D., contributes in the New York Medical Journal the following useful hints on Management of the Hair During and After Fevers:

It is during convalescence that the patient's friends, and perhaps the patient herself, are urgent for permission to have the scalp shaved and cross shaved. They will cite cases where this has been done and magnificent heads of hair have resulted, even straight hair coming in curly. It is useless to deny that such things do happen, but they are not consequent upon the shaving. I have seen more than one woman whose hair has come in curly, although lost after a fever, and without shaving. We should advise against shaving, explaining to the persons interested that it means a good deal of discomfort from wearing a wig, especially while the hair is growing, and a good deal of useless embarrassment on account of having to go about for months with short hair, to say nothing of the cost of the wig—a no small item. We should tell the patients

that there is no way of foretelling how much hair will fall out, and that it is usually not enough to prevent "doing up the hair" so as to present a respectable appearance; and that if they will follow out directions they will have just as fine a head of hair as if they had shaved, and be saved all the by no means trivial annoyances that follow upon shaving.

We should direct that the hair be brushed and combed daily, telling them that they need not be worried because this will pull out a good deal of their hair, as it is only the diseased hair that can be pulled out, and the sooner it is out the better. Once or twice a week a little pomade containing a drachm of precipitated sulphur to the ounce of a good cold cream should be well worked into the scalp. Or we may use daily a three per cent. lotion of resorcin in oil and alcohol. Personally, I prefer the pomade. Many prefer a liquid preparation. Once in two or three weeks the hair and scalp should be washed. Of course this will pull out a lot of the damaged hair, which is a matter of no consequence. For the shampoo, we may use any good soap, though the most convenient kind is a liquid one, such as the tincture of green soap. If the latter is used, we should direct the patient to invert the bottle on a piece of flannel, dip the flannel in warm water, and use just as little soap as will make a good lather. So used, the soap will not convert the hair into a mass of strings. If too much soap is used it will be difficult to wash it out. The soap should be all washed out, and the best way to do this is to have the patient place her head un-

der the full stream of the bath-room faucet, or a hose attached to the same. After washing, the hair is to be carefully dried, and a little of the pomade rubbed into the scalp to take the place of the natural oil removed in the washing.



**Inorganic Iron
in
Anaemia.**

In Gaillard's Medical Journal for April, Dr. G. Milton Linthicum discusses the value of inorganic iron in anaemia.

I think it is an indisputable fact that iron in some form is the essential and the specific in the treatment and cure of anaemia; and it remains no longer a question in my mind as to the absorbability of inorganic iron, but to give it in the form which is most readily absorbable, and there are several requirements which if fulfilled, certainly add materially to the value of the preparation and approach more nearly an ideal hæmatinic. Preferably the form of iron should be insoluble when administered, for by being so it is harmless to the teeth, a most important consideration in children, whose teeth are just forming and are susceptible to the least injuries. The preparation should not nauseate nor disturb digestion; for at the very best in anaemias we have a most sensitive stomach, the vitality of which is at a low ebb, and if we destroy the aid of the digestive organs in our treatment, we have done a far greater wrong than our tonic can overbalance, as the proper food nutrition is the first and most important consideration.

As anaemia is not infrequently a concomitant and a result of constipation, due to the self-infection, and blood destruction from the toxic agents locked up in the bowel, it is a self-evident fact that the preparation should not be astringent, but rather a laxative. Indeed, Sir Andrew Clark emphasized this point decidedly when he said that if limited to the choice of one drug in the treatment of chlorosis he would prefer a purgative.

Finally, it should be a preparation which can be absorbed with the least possible effort on the part of the tissues, for their vitality in anaemia is low.

When we read the various pamphlets and the different literature it appears that no difficulty would be experienced in finding hosts of preparations that promise to answer all these conditions.

A preparation which theoretically complied with essential requirements laid down above was brought to my attention some time since. I can not say that I am heartily in favor of proprietary preparations, but my prejudice is very much removed if the owners give me the entire quantitative formula. This preparation is made from a German formula and has recently been introduced here under the trade name of "Aromatin" (Dolle).

The formula is phosphated iron, which is insoluble in water, as well as in hydrochloric acid of the stomach, suspended as the finest pulverized powder in the menstruum, with glycerin preservatives, slightly aromatized to render it agreeable to the taste, forming a milk white liquid. The dissolving agent is a tablet containing sufficient

sodium phosphate to dissolve the iron in a half ounce dose of the fluid, together with tartaric acid and sodium bicarbonate, which effervesces when dropped into a wineglassful of water, a not unpleasant draught. The milk-like liquid is taken, followed by the effervescing tablet solution, so that in the stomach the iron phosphate is gradually acted upon by the sodium phosphate, forming the soluble bibasic sodium and iron phosphate, which in its nascent state is more readily absorbed. Thus this preparation cannot act upon the teeth in its insoluble state. It is non-astringent and neutral, thus not interfering with the gastric juices in the stomach nor the pancreatic juice in the duodenum, where iron absorption is most active. The carbon dioxide settles the stomach; the phosphate is a laxative and cholagogue, preventing constipation; indeed

this laxative effect is so decided, I found, that great care must be taken in its use with tubercular cases with a tendency to diarrhoea. As a hæmatinic, I tested its value in a series of six cases of anæmia treated for forty-seven days; three of these were poor patients surrounded by the worst hygienic conditions, and with the usual coarse diet of the poor. The other three were all in good, comfortable homes, but were not amenable to regulation of diet. The preparation was palatable and nauseated none, nor did they feel any uncomfortable effects, as bloating and belching of wind from the stomach after taking. There was a decided improvement in every case with an average of relative increase of twenty-eight and two-thirds per cent. red corpuscles and eight and a half per cent. hæmoglobin.

Reports of the Secretary made at the Semi-Annual Meeting of the Colorado State Board of Health, April 9, 1900.

Since our last meeting the work of the board has progressed steadily and satisfactorily, the following being a statement of the principal lines of work:

1. The bacteriologist, Dr. William C. Mitchell, has made 112 examinations in cases of suspected diphtheria.

The work has been hampered by the clumsy receptacles required by the Post Office Department, but the secretary has labored faithfully to secure a proper modification of said regulations. He prepared a paper on the subject which was read before the last meeting of the

American Public Health Association, and which resulted in the appointment of a committee composed of representatives from the United States, Canada and Mexico, said committee being instructed to secure uniform modifications for those countries, if possible. Being made a member of said committee, the secretary corresponded with the chairman, Dr. F. F. Wesbrook of Minneapolis, but the effort begun by our board last August was continued at the same time. The result is that on March 2, 1900, a new order was issued by the

Post Office Department, covering the points of our request. The advantages of the present order are:

1. The specimens are treated as letter mail, and hence are delivered soon after arrival.

2. The minimum size of the receptacle is greatly reduced, the advantages of this being obvious.

Unfortunately, a clerical error in our office caused the length to be $3\frac{1}{2}$ inches instead of $5\frac{1}{2}$ inches. Your secretary is now endeavoring to secure this modification in order that a longer swab may be used. If the effort is successful, it is believed the regulations will be acceptable to all health officials.

The purchase of outfits for supply depots throughout the State having been authorized by the board, the establishment of these depots only awaits the decision of the department on this one request. When they are established so that culture outfits may be in easy reach of every physician, the work of the bacteriological laboratory will, no doubt, greatly increase, and the constant battle against diphtheria will be more successfully waged.

2. The establishment of a chemical laboratory was authorized at the August, 1899, meeting of the Executive Committee, and Dr. Philip Hillkowitz was chosen as chemist. The board now offers free food analyses to all health officers having jurisdiction for communities of less than 70,000, and free water analyses for those whose jurisdiction is in communities of less than 15,000.

Since the establishment of the laboratory, the chemist has made 8 water

analyses and 23 food analyses. He has also analyzed 28 samples of suspected oleomargarine for the State Dairy Commissioner, there being paid into the treasury of the board \$40 as compensation therefor. This amount has been expended for necessary laboratory supplies. It is probable that no more of this work will be performed, as it has no bearing upon the public health, and because the compensation offered by the Dairy Commissioner is totally inadequate to the labor involved. The work of the chemist will be, therefore, limited to food and water analyses. It is worth considering whether a systematic investigation of certain food products should not be undertaken to determine whether there does not exist a necessity for a pure food law. Plans for systematic analyses of the various water supplies have been made, and it is hoped that during the coming summer much can be accomplished in this direction. The control of the water supply should be placed unqualifiedly in the hands of the State Board of Health, and those furnishing water for public use should be compelled to submit the water to regular examinations.

3. The clerical work of the board has so increased that the services of a competent stenographer and clerk became an absolute necessity. After careful consideration of the problem of financial remuneration, a plan was evolved which has permitted the employment of a most efficient clerk and stenographer, who is on duty from 9 to 12 and 1 to 4. Better provision should be made by the next legislature for the clerical work of the board.

4. Acting upon the recommendation of Dr. Bull, the board began on January 1, 1900, to require the return of death certificates from every undertaker doing business within the State. The form adopted by the United States Census Bureau was accepted by our board, though the arrangement of the data is different. The results have been most gratifying, and there are now on file what are believed to be substantially complete returns of all deaths for the first quarter of 1900. These certificates are numbered and bound, and there are here exhibited at this time the first two bound volumes of Colorado death certificates. The collection of these certificates entails considerable labor, as each one must be carefully inspected and many letters must be written to secure complete returns. But the undertakers are learning what is expected of them and less correspondence is necessary now than at first.

5. The regulations governing the transportation of the dead are giving excellent satisfaction. The board has issued license to 112 embalmers, and others wish to take the June examination. The transportation companies express themselves as well pleased with the method, one company having requested permission to use our rules for New Mexico. The close inspection of every duplicate transit permit returned is yielding its results in a closer adherence to the rules on the part of all concerned.

6. The plan of requiring the immediate report of small pox, scarlet fever and diphtheria, and providing blanks for said reports, has enabled the board to secure reports of all small pox cases

and of a far greater portion of scarlet fever and diphtheria cases than would otherwise have been possible. The figures are given in the report of the Committee on the Prevention of Communicable Diseases. As the work becomes more systematized, the number of unreported cases will diminish, and our books will, therefore show more accurately the exact conditions. The secretary has frequently to advise local health officers as to the length of quarantine in contagious diseases. So far the opinions given have been as follows:

For Scarlet Fever. All houses should be placarded for at least six weeks, and no person from such infected house should be permitted to attend school for a period of at least eight weeks, and not less than two weeks after the fumigation of the house, if the disease has been protracted beyond six weeks.

For Diphtheria. The quarantine should be maintained until an examination of the culture by the bacteriologist to the board shows no diphtheria bacilli.

In the Case of Small Pox. Quarantine should not be raised until desquamation is complete; if in doubt, wait. These regulations, or others suited to the case, should be definitely adopted and published by the board.

7. Acting upon the suggestion of Dr. William P. Munn, formerly a member of the board, the following recommendation was adopted at the meeting of October 9, 1899: "That unless the health authorities of New Mexico shall enforce more stringent regulations to prevent the introduction into Colorado of small pox, representations shall be made to the Interior Department and the Marine

Hospital service with a view to placing health matters within the territory under Federal control." Accordingly, correspondence with Gov. Otero was begun, and a most courteous letter was received, promising to rectify the matter; but no apparent results following, another letter was written, to which reply was made by the Territorial Board of Health, sufficient promises being again given. Continual infection being reported, the matter was laid before the United States Marine Hospital service, with the result that Passed Assistant Surgeon Cobb has been detailed to see that the cause for complaint is rectified. He is now in touch with this board and holds himself ready to proceed to any part of the territory where his presence is needed.

8. The tuberculosis investigation culminated in a tuberculosis conference held December 23, 1899, which was attended by the Governor, the Secretary of the State Veterinary Board, the Executive Committee of our board, and a number of others interested. The report made and the recommendations adopted were given to the press and published in full. Since then a new circular on the subject has been prepared and is being distributed now. No progress has been made by the State board in the matter of testing dairy herds, but Pueblo has appointed a dairy and meat inspector, whose work, I believe, covers this matter. Doubtless, it would be wise to send a number of copies of this new circular to every physician practicing within the State.

9. The secretary has notified all boards of County Commissioners that

they must appoint a county health officer or officers. A large minority have not complied with the request. Mandamus suits should be begun to compel such appointments, and incorporated towns should also be made to live up to the law in the case.

10. The possibility of the invasion of Colorado by bubonic plague at no distant date must be admitted. San Francisco has become infected, and it is officially reported that certain infected persons are believed to have escaped to other cities. This being the case, Colorado may before long have to meet this contingency. Your secretary recommends, therefore, that the two chief sources of danger, filth and rats, be gotten rid of by placing the entire State in the best possible sanitary condition and by urging a war of extermination on this common pest. He also recommends that the Marine Hospital service be requested to furnish a small supply of the Haffkine Prophylactic and the anti-pest serum in order that any sudden emergency may be met.

11. The proper filing and indexing of correspondence, reports, etc., is of immense importance in an office like this. A card index system has been adopted, and all back correspondence will soon be properly indexed.

12. The Auditing Board in appreciation of the valuable work being done by the State Board of Health, and of its importance to the State at large, has decided that it is a part of the executive branch of the government. The justice of the decision is apparent, and its benefits are not capable of overestimation.

For the cordial co-operation of the members of the board the secretary here records his gratitude.

G. E. TYLER, Secretary.

REPORT OF COMMITTEE ON REGISTRATION AND VITAL STATISTICS.

To the State Board of Health of Colorado:

Gentlemen: As chairman of the Committee on Registration and Vital Statistics, I beg to report that substantial progress has been made in securing reliable State mortality records during the past year, largely through the plan of requiring regular reports from the undertakers of the State.

The difficulty in obtaining reliable statistics of births and deaths from the physicians of the State seems to be largely due to the fact that no one has sufficient interest in the matter to enforce the penalty for failure to report. This condition of affairs makes our records from this source fragmentary and incomplete, and also misleading. In view of this condition, I would suggest that the State Board of Health recommend to the legislature the creation of the office of Registrar of Vital Statistics. This officer to be *appointed by the State Board of Health*. That his salary be (what in the judgment of the State Board of Health would secure the services of a competent man.) That it be his duty to keep a full and complete record of all the births, marriages and deaths occurring in the State, and that he compile from his records complete tables of statistics for publication in the reports of the State Board of Health.

Very respectfully, H. R. BULL,
Chairman of Committee on Registration and Vital Statistics.

REPORT OF COMMITTEE ON THE PREVENTION OF COMMUNICABLE DISEASES.

The committee on the prevention of communicable diseases has the honor to make the following report:

Small Pox. Since October 9, 1899, the date of our last meeting, there have been reported 87 cases of small pox in Colorado. The disease, as is usual in well vaccinated communities, has been mild, but six deaths having occurred. Nineteen of the cases are noted as varioloid, of which 10 had been previously vaccinated and one had suffered from small pox fifteen years before.

From the extensive prevalence of small pox in New Mexico and Kansas, and its sporadic occurrence in many other States, there is reason to think that we shall have it with us constantly for many months to come.

Scarlet Fever. Since October 16, 1899, there have been reported 428 cases of scarlet fever, of which 298 cases have occurred in Denver. It is likely that many mild cases have occurred outside the care of physicians and have thus escaped notation. Though the disease in general has been milder than in many epidemics, no exact statement of mortality can be given until the death certificates are classified.

Measles. Three hundred and seventy-eight cases have been reported since December 30, 1899, the date on which reports of this disease first came in. Three hundred and sixty-seven of these were in Denver. The mortality has been small. Many cases throughout the State must have escaped notice.

Diphtheria. This disease is more equally distributed over the State than the last two, probably, and from its nature, more likely to be reported. Two hundred and eighty-one cases are noted, 131 of these being in Denver. We hope later to give the mortality in this as well as in the last two diseases.

Chicken Pox. Ten cases of chicken pox have been reported.

Whooping Cough. Six cases of whooping cough have been reported.

Mumps. Three cases of mumps have been reported.

Your committee wishes to commend most cordially the excellent system of recording contagious diseases, which with the permanent record of death certificates, inaugurated by our secretary, render the valuable statistics collected by our board accessible, and, therefore, more valuable.

The value of this improvement of the work of the board is as great as that in connection with the study of tuberculosis, and both are most creditable to our executive officer. J. N. HALL,
Chairman of Committee on the Prevention of Communicable Diseases.

REPORT OF THE COMMITTEE ON GENERAL HYGIENE.

To the Colorado State Board of Health:

Gentlemen—I suggest the early appointment of a committee to wait upon the railroads for the following purposes:

To provide every seat in passenger coaches with cuspidors containing some

form of disinfectant, especially in smoking cars.

That more attention be paid to the temperature and ventilation in day coaches and sleeping cars, each day coach be provided with a thermometer, and that brakemen and porters be better instructed in performing duties relating to this matter.

That some attention be given to the source of water supply, more cleanliness and a better method of handling ice placed in water coolers in passenger coaches.

I have been informed by brakemen that the water on the cars is sometimes carried for several trips without any cleaning of the coolers, and any number of times I have seen a quantity of ice lying on the platform, covered with dirt of every nature, transferred to the water cooler by an employe, with hands not only black from grease, but having just been used to remove tobacco juice from lips and chin, and worse from nostrils.

The porters on Pullmans should also be prevented from dusting seats and windows while en route or nearing the destination of the car.

I would also suggest some attempt at having passenger coaches disinfected at the end of each run.

I believe the efforts of the board will result in greater benefit to the people of our State, if more success was had in the direction of the suggestions offered above. Yours very truly,

A. B. HARBISON,

Chairman Committee on General Hygiene.

COMMUNICATIONS.

STATE PATHOLOGICAL MUSEUM.

Every one must know that a large amount of valuable pathological material is thrown away in this State. The exhibit of the Indiana State Society, at the last annual meeting of the American Medical Association at Columbus, was the center of greatest interest and attendance of members during this convention. It was universally commended and admired, and such exhibits will doubtless be a permanent feature of future conventions. President Keen has appointed a committee from each State to select and prepare a collection for the coming convention at Atlantic City.

This is a matter of supreme concern and of permanent interest to the States themselves. The medical men and societies of this State will find it to their interest and advantage to secure and preserve in permanent form interesting and instructive pathological material. Much of it now goes to waste. We ought to be able to secure room and cases where the specimens can be labeled as usual,

and the histories recorded and filed. It seems to me fitting and appropriate, if room can be secured, to establish it in connection with the Colorado Medical Library Association. A museum of pathology in association with this most commendable professional enterprise would add to the attraction and interest of both.

That it would reflect new and additional honor and lasting credit upon the profession of Colorado, there can be no doubt. It would be the centralized nucleus where individuals, schools and societies could come for reference and instruction. The best method for executing this wish is a matter for consideration. The State Society or its president might appoint a committee to take charge of the matter and formulate plans, etc.

I make these suggestions in the hope that ways and means can be devised to give tangible shape to a project that should appeal to the pride and interest of every worthy professional man and woman.

W. W. GRANT.

NEWS ITEMS.

NOTES ON THE UNIVERSITY OF COLORADO CATALOGUE FOR 1900.

The new catalogue of the University of Colorado contains 210 pages. The number of students in the university is 433, in the State Preparatory School, 356, a total increase of 13 per cent. over

last year. In the student list of the university proper 30 States and 70 cities and towns of Colorado are represented. There are 86 professors, instructors and lecturers in the faculty list.

The catalogue is well worth a careful perusal. There is every evidence that the State University is doing the work

which the State has a right to expect and is offering to our high school graduates an excellent opportunity for higher education. That the University of Colorado maintains a standard equal to that of the best State universities appears in the requirements for admission, the variety and excellence of the courses offered in each department, the equipment of the laboratories, the high value of the library and the periodical list, the quality of the faculties and the character of the graduate work.

At least a complete four-year high school course is now required for admission to the law and medical schools. The medical course covers four years and the law course three years. One year's additional residence at the college is required for the degree Master of Arts, and three years for the degree Doctor of Philosophy.

Some of the seniors in the College of Liberal Arts are taking advantage of the rule which allows them to choose electives from the first-year subjects of the law and medical schools. This plan makes it possible for them to save an entire year in taking both the academic and professional degrees.

There are now about thirty-six high schools on the accredited list of the university, and many others in the State are rapidly approaching the standard recognized by the best universities. Colorado already surpasses many of the older States in the character of its secondary education. It is a proper function of the university to aid and encourage the high schools, as it is the privilege of the high schools to make use of the opportunities for higher education

provided by the State. The co-operation between parts of the public school system has already done much to promote education in Colorado. As in other State universities, the University of Colorado offers courses in pedagogy, as supplementary to other regular studies, for the purpose of preparing teachers for high school work.

THE PLAGUE.

The plague still pursues its rather uneven tenor of destruction. In Manila it is reported on the increase, there having been thirteen deaths during the week ending April 21. It has broken out in Cawnpore, India, and the efforts to secure its restriction have caused riots and bloodshed. It is ravishing the shores of the Red Sea. At Port Said there have been fourteen deaths. It is increasing in Hong Kong, where they have had sixty-five cases in three weeks. In Australia it is spreading. Of still more interest to us is the fact that it has gained a foothold in San Francisco. This, though acknowledged by the local Board of Health, as noted in our last number, was actively denied by the civil authorities, the mayor having written and telegraphed right and left. Telegraphic news from San Francisco under date of May 19 are to the following effect:

The Board of Health has adopted a resolution declaring that bubonic plague exists in San Francisco. The health authorities say that while there are no living cases here, there have been six deaths during the past three months, and they have decided to take precautions against the development and spread of the disease.

The resolution, which was adopted late last night, reads as follows:

"Resolved, That it is the sense of this board that bubonic plague exists in the city and county of San Francisco, and that all necessary steps already taken for the prevention of its spread be continued, together with such additional measures as may be required."

A force of physicians went through Chinatown to treat Chinese with Haff-kine prophylactic, as a preventative against the plague.

The members of the Board of Health say that there is absolutely no danger of the development or spread of the disease at San Francisco, but at the same time they do not propose to take any chances and it is their duty to take precautions.

Texas has declared an absolute quarantine against San Francisco.

According to the Denver papers the Colorado State Board of Health has for the past two months been devising plans to battle against the bubonic plague, should it by chance escape the rigid sanitary quarantine barricades of San Francisco and appear in Colorado. For months Dr. G. E. Tyler of the Health Board has been in correspondence with the authorities at Washington, and has arranged for a federal inspector and a corps of surgeons and immunes from the marine hospital service at Washington to start to Denver within a few hours after being notified by wire.

In the event of such a dire condition, the federal agents, together with the State Health officers, would be sent to the western boundaries of the State and all San Francisco traffic would be

quarantined and inspected before being released. The board has been watching closely the outbreak in San Francisco, and that an official announcement was to be made by the Board of Health of that city was known confidentially to the State board several days ago.

In the event of the plague getting out of San Francisco and into Colorado, this board would immediately issue an order demanding that all rats be wiped out, for they spread the disease. The work would largely be left to the federal officers, who are supposed to understand the plague.



IMPURE MILK.

The Health Department of Denver is after the milk vendors.

Three dairymen accused of using freezine for preserving their milk—W. J. Ray, Clover Leaf dairy; Nils Holm, Ralston Creek dairy, and C. A. Rider, Red Clover dairy—were each fined \$10 and costs in the police court, and the fines were suspended on payment of costs. The cause of this decision on the part of the court was the contention of the defendants that they had purchased the milk from other parties. Holm claimed that Pat McCabe, who lives just over the line in Jefferson county, sold him the doctored milk, while Ray asserted that the Favorite Creamery, Arondt & Elliott, proprietors, were responsible for his trouble. Complaints were accordingly sworn out against these persons and the cases were set for Tuesday, May 22. J. A. Wagner, the Boulevard dairy will be tried for the same offense on the same day, as well as for having milk below the standard.

THE CHRISTIAN SCIENTISTS AGAIN.

The Masonic order of Topeka, particularly the Knights Templar, are planning to prosecute local Christian Scientists, who, they say, were responsible for the death of Mrs. John Torrence. Mr. Torrence was, up to the time of his death, eight months ago, chief clerk in the Atchison, Topeka & Santa Fe car service here. He was a leading Mason. His wife died May 19 from typhoid fever. She was a Christian Scientist, and with the local healers, resisted the demands of her friends that a physician be summoned.

Mrs. Whitlock, of Chicago, mother of Mrs. Torrence, was, it is asserted, refused permission to see her daughter, but finally entered the sick room. Mrs. E. E. Whitaker, the scientist in charge, said, testifying at the coroner's inquest, that Mrs. Torrence was killed by the shock of the surprise at seeing her mother and not by the lack of medicine. The coroner's jury rendered the following verdict:

"Mrs. J. M. Torrence came to her death by peritonitis, (general) caused by perforation of the intestines, due to typhoid fever. The case was under Christian Scientist management and had no medical care or treatment, and in our opinion, she did not have intelligent care which would give her any possible chance for recovery."

The plans and specifications for the new detention ward for insane for the Arapahoe County Hospital have been approved by the State Board of Charities and Corrections. The plans were

prepared by the F. E. Edbrooke Architect Company. They call for a building two stories high to be built of Golden brick, with stone trimmings and to have a tile roof.

The new building will have a tile roof, will be modern in every way, and will cost about \$40,000. It will be what its name indicates, a place of detention for the insane until they are discharged or sent to the State insane asylum.

The county is much in need of such an institution. At the present time it has between thirty and forty patients temporarily confined in the private asylum at Pueblo. It is intended to have the building ready for occupancy within four months. When it is completed and furnished all insane patients whose malady is not of a nature to require that they be sent to the State asylum will be detained there.

The secretary of the Board of County Commissioners was instructed to advertise for bids for construction, but the matter has been held up on account of labor matters. Representatives of the Building Trades Council asked that none but union labor be employed. While there was no objection to this, the advertising has been postponed because no assurance could be given that there would not be a demand for increased wages after work was commenced.



The wife of W. E. Hutton, an attorney of Denver, gave birth to triplets April 12 and 13—a girl died; the others, a boy and a girl, live. Drs. H. L. Taylor and W. H. Lougeay officiated at the birth.

STATE INSTITUTIONS.

During the past month 1,502 persons were cared for at the following institutions:

State Home for Dependent Children, 49 males, 30 females.

School for Deaf and Blind, 68 males, 54 females.

State Hospital for Insane, 315 males, 181 females.

Soldiers and Sailors' Home, 143.

Industrial School for Girls, 44.

Penitentiary, 522 males, 2 females.

Industrial School for Boys, 162.

S. A. Weltmer, president of the American School of Magnetic Healing at Nevada, Mo., and Jos. H. Kelly, secretary, have been charged before the United States District Court at Kansas City with using the mails for the purpose of fraud in connection with their advertisements to cure disease and cause success in business by their "absent treatments." They have also been refused the use of the mails under the fraud order. The same proceedings might well be taken with some of the local healers.

The State Board of Health reports the total number of deaths in the State for January last as 594 and for February, 662. Consumption and pneumonia carried off a majority of the victims.

It is stated that the consumptives now in the Arapahoe county hospital are to be transferred to the poor farm, where they will be maintained isolated from the other inhabitants, and given

all the advantages which that institution can offer. A new addition is to be made to the separate cottage now there.

The University Medical Magazine has passed into the control of the board of trustees of the University of Pennsylvania and will be the organ of the Department of Medicine.

The State Board of Dental Examiners is planning to weed out unqualified practitioners of dentistry in the State. It is to be hoped that they will be more successful than the State Board of Medical Examiners.

A Mr. See, who died at New Rochelle, N. Y., the other day, had three physicians, two Christian Scientists, a Roman Catholic priest and a Methodist minister in attendance on him. To recover under such conditions a man would have to be equipped with the constitution and powers of endurance of a war-seasoned Missouri mule.

The Chicago Tribune accuses a wild Western poet of referring to a mole on a woman's cheek as "a teardrop petrified by its own audacity." The accusation is entirely unmerited. A Western poet, if he had referred to such a thing at all, would have said it was a "dark brown oasis in a desert of bewildering beauty," or something like that.

The man that invented ice cream soda is dead, but his product is yet in good fizical condition.

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ORIGINAL COMMUNICATIONS.

Diseases of the Bladder and their Diagnosis.*

By WM. P. MUNN, M. D., PUEBLO, COLO.

The time at your disposal to-night will only permit me to consider some of the salient points in diagnosis of diseases of the bladder and briefly to refer to some illustrative cases.

We must always bear in mind that the bladder is little more than a reservoir in the course of the urinary track, where for convenience urine accumulates until it can be discharged. The gates that close the slit-like valve of exit and the apparatus that take part in the expelling action introduce factors of physiologic import into the study of the bladder functions; the closely related points of exit of several of the ducts of the genitalia still further complicate conditions at the orifice of discharge, commonly designated "the neck of the bladder," although it is more properly the prostatic urethra.

Bladder disease may be classified from several standpoints. Anatomically we have disease of the base and of

the fundus, of the mucous membrane, of the interstitial layers and of the whole bladder wall, of the sphincter of the bladder and of the orifices of the ureters. Physiologically we have a classification into disorders that obstruct urination, that modify it as to character or frequency, as to ease or pain in performance, as to complete control or incontinency. There are also classifications dependent upon the character of the urine itself and the character of the stream as passed. The most modern and satisfactory classification, however is that which depends upon pathologic and bacteriologic bases, characterizing the disease according to the anatomic element which has acted as the exciting cause or the bacterial increment that has forced an entrance, e. g., we have the occurrence of calculi upon blood clots, mucous shreds or bacterial precipitates; pus that occurs with or without bacteria; inflammatory

*Address to the Denver and Arapahoe Medical Society, May 8, 1900.

changes of the bladder wall dependent upon invasion by any of the specific organisms.

For convenience in clinical study it is well to investigate every case of disease of the urinary organs systematically and seriatim from each of these standpoints successively, finally basing diagnosis upon the composite disease picture that results therefrom. Sometimes the clinic manifestations alone seem to be sufficient to base a diagnosis upon; at other times they are so misleading as to throw but little light upon the subject, which is only elucidated through the bacteriologic or pathologic investigation.

Inquiry for the purpose of determining the existence of a disease of the bladder must take cognizance both of subjective and objective conditions. Determine first whether the act of urination is unduly frequent. For this purpose the simple statement of the patient as to frequency or infrequency is often inaccurate. It is well to insist upon having him state definitely the number of times and the hours at which he urinated during the day and night preceding the inquiry. Thus not only the fact of frequency but the relative frequency during day and night may be established. The number of acts of urination must be considered in connection with the amount voided at each act; with a normal amount each time, frequency may be the simply necessary indication of a large daily excretion of urine due to diabetes, to the taking of a diuretic, the imbibition of large amounts of fluid or the use of some spe-

cial article of food. When such is the case, the bladder itself not being diseased, mere frequency has no significance of bladder lesions.

Again, frequency may be associated with diminished total excretion of water and increase of soluble solids which cause the urinary secretion to be unduly acid and irritating. Such urine is of high specific gravity and the conditions are usually relieved by the administration of large quantities of water in conjunction with alkaline or soothing vegetable diuretics. Such treatment has indeed become routine with many practitioners, who employ it both as a remedial and diagnostic measure.

Urine that is normal in specific gravity and abnormal in anatomic elements demands careful study to determine the source of the trouble to which it contributes. Pus is the most common of these abnormal constituents. When it is present in the first part of the urine as passed, and especially when rolled with shreds or masses of mucus so as to form the well known "tripperfaeden" threads, it owes its origin to the urethra. When absent from the first portion passed and present only at the last of the act, it is evidence that it has been accumulating in the base of the bladder. When well mixed with the whole urinary excretion it may come from the whole bladder wall or may have reached the bladder from an origin in either the ureters or the kidneys. Pus thus existing demands most careful study to determine its origin if possible, and it must not be forgotten that all of these organs combined may take part in a

pus-forming process that originated in but one of them. A kidney abscess, pyelitis or ureteritis will contaminate the bladder, which then continues to take part in the pus-forming process until such time as the original source of infection exhausts itself or is removed, when the bladder, either spontaneously or under simple irrigation, ceases to produce pus, providing that there has been no true infection of its own structures.

The presence of tube casts and of epithelial debris enable the microscopist to determine with some degree of certainty whether the kidney alone or the bladder also is infected.

Frequency is the most common symptom that brings a patient under observation with a self made diagnosis of bladder or kidney disease; yet in and of itself it is far from conclusive evidence. Nevertheless I find it all too often the one condition upon which a diagnosis of cystitis has been unreservedly made. In a majority of such instances it is found by careful examination that the symptom is dependent upon disease of the urethra rather than of the bladder, and that when cystitis really does exist it has developed secondarily to infection of either the urethra or the kidney. To determine the condition that gives rise to frequency is sometimes one of the most difficult and delicate diagnostic procedures. In the male it often arises from a simple stiffening of the walls of the prostatic urethra, thus converting the entrance to the physiologically closed tubular valve into a continuously open funnel. Then as

soon as the bladder fills up to that level, a drop or two of urine enters the cystic opening of the urethra and there is set up a physiologic reflex that can only be satisfied by immediate urination. This we designate as "urgency." Such urgency often exists without any actual disease of the bladder; in young men it is usually due to gonorrheal deep urethritis and more infrequently may arise from simple septic, typhoid, tubercular or dirt infection. These infections of the deep urethra must be sharply distinguished from cystitis as treatment directed to the bladder alone will never benefit them. If, however, a secondary cystitis has been developed, treatment must be given both to the bladder and urethra in order to be of avail. The clinical history the bacteriologic findings and the nature of the epithelial debris are all of value in clearing up the diagnosis of such a case. The urethra itself should be treated, when discovered to be so involved, either through the urethroscopic tube under direct illumination by an electric light, or by instillations of metallic astringents through a deep urethral syringe, as the case may seem to demand. If the prostatic or the seminal vesicles are involved they must also receive appropriate local treatment coincidentally. It will be quite useless to attempt to benefit such a patient by treating the bladder alone. In the female it is often the case that frequent urination of urethral origin has been attributed to the bladder and that months or even years of tedious, painful and absolutely useless treatment has been indulged in, simply

because there has been no systematic examination of the urethra before attacking the bladder. This is especially the case in unmarried women.

I remember such a patient, aged about thirty, who had been under the care of one of the most eminent surgeons in New York and irrigated almost continuously for about a year without benefit. Her condition finally became so desperate that it was thought she would die, and she was brought back to her home in this city. Upon making an examination I found that only the smallest catheter could be introduced through the urethra; a dense cicatrix obstructed the passage and was about one inch in length. This stricture I immediately cut freely, making four long and deep incisions; thereafter I passed large dilators every day. The irrigations, which had been previously ineffective were still kept up. Improvement was rapid; the bladder was relieved of its secondary infective material and she made a rapid recovery, gaining about 30 pounds in the succeeding six months. The stricture in this case I believe to have been the result of a contracting tubercular ulcer, as the patient had previously suffered from pulmonary tuberculosis.

Exclusion of kidney disease is also very necessary before arriving at the conclusion that the bladder alone must be treated. Pus, blood, casts, albumin and bacteria all demand most rigid inquiry in order to determine this. There may be utter absence of clinical symptoms pointing to the kidney, yet as a matter of routine every difficult case should be subjected to examination by either the urine segregator, the cystoscope or the urethral catheters, as the case may appear to demand. In this

manner many an obscure diagnosis may be cleared up and many a necessary operation decided upon or a useless one avoided. As examples of the necessity for such examinations I shall cite several cases.

An unmarried woman, 28 years old, suffered a fall, and thereafter began to have frequent urination; her medical attendant washed her bladder, and thereafter pus made its appearance in the urine. He made an external and vaginal examination and decided that her uterus had been dislocated and was pressing upon the bladder, thus causing all her trouble. In spite of treatment she became progressively worse during three years, and was finally confined to bed, so emaciated as to be unable to rise for any purpose. Urination occurred every fifteen minutes, and she never rested except under the influence of morphia. At this time a surgeon was called who made a digital exploration of the bladder, and, discovering a velvety mass near the orifice of the left ureter, he removed it by curetment, under the impression that it was a papilloma. The procedure gave no relief and the patient seemed in extremis. At this time I was asked to examine the bladder. With some difficulty I secured consent to use the Kelly catheters, which were then new. After getting pus from the left ureter, I succeeded in demonstrating that the left kidney was dislocated three inches from its normal position, and that it was probably the seat of extensive suppuration. Thereafter I removed this kidney through the loin incision, and found it filled with multiple abscesses, the kidney substance being completely disintegrated. The next day after operation she went three hours without urinating; the pus rapidly disappeared from her urine and she has now remained for

six years free from the bladder irritation that had been previously thought to be her sole trouble.

A case differing from this is that of a married woman, now 43 years old, who some years ago was seized with frequent urination in which blood made its appearance but once. She fell into the hands of a practitioner who suspected tumor of the bladder; operated upon suspicion and failed to find the anticipated growth. Later a gynecologist removed the ovaries, which he suspected of having a reflex influence upon the bladder. Notwithstanding these energetic operative measures frequency persisted. Subsequent careful study of her case by several competent medical men has resulted in the discovery that her urinary difficulty is much less pronounced at intervals when she is free from uric acid exacerbations; when her trouble is at its worst she passes many sharp uric acid crystals. On one occasion she has had an attack of renal and ureteral colic, due to this cause. Slight urethral stricture supplies the remaining pathologic element of her troubles.

This woman might have been saved two dangerous operations had her case been submitted to proper study and investigation and rational medication years ago. It is in sharp contrast with the preceding case in which earlier study and examination would have led to earlier operation and relief.

Dilation of the female urethra and digital exploration of bladder affords information of greater value than can always be obtained otherwise. This digital exploration should usually precede any operative attack, as it may prevent many a mistake, serious alike to the patient and the surgeon. Bladder drainage of inexplicable cases of cysti-

tis in the male is a remedial measure of value and affords opportunity for digital exploration through the perineal wound, thus leading to the discovery of lesions that may otherwise be overlooked, I have thus discovered ulcers of the lower quadrants and submitted them to curetment with decided benefit.

Exploration by the eye is, however, here as elsewhere, superior to all other methods if it can be properly practiced. The cystoscope, therefore, when it can be employed, often leads to certainty when without it we would simply act upon probabilities. Yet it must not be always relied upon absolutely, for in addition to requiring an amount of skill that is only acquired by years of patient practice it is occasionally misleading to the most practiced eye. Theoretically it is a perfect exploratory instrument. Practically, it must be used with care and its pictures interpreted with discretion, based upon considerable experience. It is a diagnostic aid that the genito-urinary surgeon should never ignore in deciding the question of operation for doubtful cases. I have sometimes made the most positive and satisfactory diagnosis by its aid; in other instances it has failed to give the definite information desired. Therefore, it cannot be dismissed as some writers affect to do as a diagnostic toy; neither should it be recommended to the general practitioner, whose opportunities for its use are too few to enable him to perfect himself in the necessary methods.

As an example of its value, I may cite two cases of papilloma diagnosed by it last year, operation confirming

the results of the examination. The following case illustrates its value in connection with the urine segregator. The patient is a man upon whom I operated five years ago, performing perineal section to enable me to scrape an ulcer of the base. He was benefited, but a year later recurrence of symptoms led him to place himself under the care of Sir William Hingston of Montreal, who performed an exploratory suprapubic operation without results. Later the surgeons of the Hotel Dieu made a diagnosis of tuberculous bladder and prostate, and gave him six months to live. A year after that verdict he again came under my care, being much heavier than when I had last seen him but still suffering from some urinary frequency. There was pus mingled with casts in the urine. First washing the bladder thoroughly, I used the cystoscope, and was able to satisfy myself that there was then no gross lesion of the bladder; the old ulcer was gone. After another irrigation the segregator (Harris' instrument) was introduced, and the urine from the two kidneys collected separately. That from the left kidney was free from pus, but contained some casts; that from the right kidney was small in quantity, full of pus and casts. No tubercule bacilli in either specimen. I was thus able (1) to establish the existing suppurative trouble of the right kidney, of which clinical evidence had been too slight to base a diagnosis upon; (2) to decide that the bladder needed no further operation at that time; (3) to refrain from urging right nephrectomy, because the urine from the left kidney gave reason to believe that it could not bear the strain of extra work that would fall upon it if the right one was removed. I therefore put him upon urotropin and salol, and had the pleasure of hearing from him some months afterward that

he was doing well, gaining flesh and the urinary frequency, while still present, was better than heretofore.

The urine segregator has also been of service to me in determining that the kidney to be allowed to remain was functioning well in an operation for nephrectomy undertaken last year. The result in that case was satisfactory so far as the operation was concerned, although it is probable that a tubercular lesion of the lower right quadrant of the bladder will eventually cause a fatal termination.

In this connection it is to be noted that the advice of the text-books is almost without exception against interference with tubercular ulcer of the bladder. From this dictum it seems to me there is good reason to dissent as to certain selected cases at least. In these an operation may give temporary improvement, and in some cases a return to the activities of life for a period of months or years. Such a result, even in a minority of cases, is sufficient to keep the operation from utter condemnation.

Following the consideration of frequency there should be an inquiry as to the presence or absence of pain, and when present its location, character, frequency and severity, the time of its occurrence and its coincidence with other signs and symptoms. Pain may occur at any point along the genito-urinary tract without being an infallible evidence of the location of the lesion, yet some import should always be attached to its location. Thus pain felt at the head of the penis at the close of

urination is usually evidence of irritation at or near the bladder orifice of the urethra, and may indicate calculus, prostatic enlargement or inflammation, or a new growth near the base of the bladder. Not infrequently it occurs in connection with pyelitis or renal calculus. Reflected pain in other parts of the tract often occurs. Hurry Fenwick mentions one case in which a persistent pain in the testicles was the only clinical evidence of a renal calculus, which afterward entered the ureter. I have seen a similar instance in a patient under the care of Dr. Rogers. One of my own patients at this time suffers from persistent pain at the fundus of the bladder, which is evidently due to an old deep urethritis, since it disappears as if by magic when a solution of eucaïn or cocaine is instilled into the prostatic urethra.

In a patient under my care last year, cystitis, a tight urethral stricture and persistent pain in the right testicle had coexisted for some years. The stricture was dilated and the bladder irrigated but pus persisted in the urine, and the pain in the testicle continued. By the use of the urine segregator I determined that the pus came almost wholly through the right ureter. The right kidney had a mobility of about two inches. I opened the kidney through the loin and explored it, failing to find either stone or abscess. Then stitching the kidney in place, I extended my incision obliquely downward and inward, exposing the right ureter throughout its course, and hoping to perhaps find a lodged calculus. I found no calculus, but instead discovered at the brim of the true pelvis and attached to the iliac vessel a bunch of enlarged lymphatic

glands which pressed upon and occluded the ureter. This bunch of glands I loosened, but did not detach, for fear of hemorrhage, turned them over away from the ureter and stitched them to the iliacus muscle with a catgut suture. The patient made a rapid improvement, the pain disappeared from the testicle and the pus under simple irrigation disappeared from the urine; both results in my opinion being due to relief of the ureteritis caused by pressure. To-day I learn that the symptoms have recurred in this patient, coincident with an exacerbation of general tuberculosis. It is possible that the glandular enlargement is tubercular, and has again interfered with the ureter either by pressure, contiguous invasion or ulcerative discharges.

From the recital of these cases it may be seen that pain, while of some value for diagnosis, must be considered only in connection with the analysis of all the other conditions found to exist after most careful investigation. Even its complete absence is not always valuable negative evidence, since there are many cases of calculus and of tumor in which no pain is complained of.

Blood in the urine is a sign which will usually bring the patient promptly under surgical observation. If it appears in connection with perfectly clear urine, it is fair evidence that the lesion does not involve the whole bladder, and that its area is small. Appearing at the first of urination it is usually an index of urethral origin; when it appears at both first and last, there being an intervening stream of clear urine, the prostatic collar may be suspected. When well mixed throughout and fresh in color it indicates bleeding from the

bladder wall, but not from the base, as a rule. When somewhat old, and coming at the last of the act, it is more apt to have been a slow oozing from the base; old, black and well mixed, it is suspected to come from the kidneys. To all of these statements probability only can be assigned, not certainty. Continuous rapid hemorrhage from the kidney or ureter often occurs, and the blood is bright red when passed with the urine. The clots of wormlike shape that have been sometimes supposed to be casts of the ureters are just as often formed in the urethra. Large and breaking down clots are, as a rule, of bladder or prostatic origin.

Every case of hematuria demands early and thorough examination to determine its source. Physical inspection of the external organs must be a part of this examination, as may be well illustrated by the following two brief histories.

A very old woman, who for years has suffered from incontinence of urine, suddenly began to pass blood, and thereafter retention ensued. A large suprapubic swelling appeared, which was thought at first to be retained blood clot in the bladder. Several attempts to catheterize were made, but without complete exposure and without success in drawing the water. When I had her placed upon the table I found the urethra surrounded by a dense mass of stony hardness, evidently a scirrhus cancer. Ulcerative changes had destroyed the meatus, so that attempts to pass the catheter without the aid of the eye were futile; the blood came from the eroded vessels of the urethra; the suprapubic mass was simply the bladder distended with urine, which was

readily evacuated when a catheter was passed into the bladder through the ulcerated area.

The other case was that of a young man who entered hospital because of an obscure febrile movement that was suspected to be typhoid fever. He suddenly complained of passing blood with his urine, whereupon he was transferred to my service for investigation. I found him bleeding continuously from the orifice of a long, tight and greatly inflamed foreskin. This, upon incision and removal, was found to conceal a large eroding chancreoid ulcer that had opened the dorsal artery of the penis. The hemorrhage was therefore quite outside of the urinary canal, and the admixture of blood with his urine a mere extraneous accident. It is of further interest to note that the discovery and treatment of his venereal lesion put an abrupt end to his obscure fever.

In cases where the blood is undoubtedly passed with the urine it is well for the surgeon to insist that if possible the urine should be passed in his presence, or he should withdraw it by catheterization. The urine thus passed or drawn should be noted in accordance with the observations already made as to time, quantity and quality of blood admixture. It should be received in three glasses or vessels, and set aside for further investigation with the microscope. The bladder should then be irrigated with a normal salt solution and the Harris segregator introduced in order to collect the urine from each half of the urinary tract separately. Blood from one side alone indicates a one-sided lesion, while character, amount and rapidity of appearance may lead to a decision as to place of origin.

It is possible in the female to secure the same information by the use of the Kelly tubes and air dilatation of the bladder, the hips being well raised for the purpose. When it is desirable to carry the exploration beyond the bladder itself, the ureteral catheters are the means employed.

By visual inspection through these short, broad urethral tubes by means of direct or reflected light, a reasonably satisfactory view of the bladder wall can often be obtained. In one instance I thus found the mucous membrane wholly anemic, and the bloody urine entering from the left side. It proved to be a case of renal calculus of that side. In another case I found an infiltrated area with lime scales upon it, which had hitherto given a fictitious impression of calculus. This deposit of calcareous scales is of somewhat frequent occurrence in connection with ammoniacal urine and new growths, especially should the new growth be of a cancerous nature. I have twice so observed their presence, and find that Fenwick attaches some importance to their discovery as an evidence of cancer.

We naturally suspect new growth in every case of sudden urinary hemorrhage in the adult if stone can be excluded. But hemorrhage alone is altogether insufficient to base a diagnosis upon, nor should operation be undertaken upon this unsupported suspicion, unless the case seems otherwise very grave. I have observed a case of fatal hemorrhage of the bladder, in which post-mortem examination revealed

nothing but an intensely engorged mucous membrane. Operation for such a condition would have been entirely futile.

In a young man who last year had one free hemorrhage coincident with the appearance of a hematoma of the right spermatic cord, the urine contained debris, which I submitted to Dr. Mitchell for examination, and in which he found the eggs of the *Hematobium Bilharzia*, a parasite very unusual in temperate climates and altogether inexplicable in this case, since my patient had never been out of the United States.

A deep urethral or prostatic hemorrhage sometimes reflows into the bladder and gives a mixed, bloody urine instead of coming, according to rule, at the beginning of the act. It is equally easy for a very free hemorrhage from kidney or ureter to partially fill the bladder so that all of the urine as passed will seem to contain fresh blood as if from the bladder wall. It cannot be too urgently repeated that the sum total only of signs, symptoms and lesions can be relied upon for decision in any given case. Diagnosis must always be guardedly expressed; since errors are by no means infrequent.

I remember one instance in which two eminent gynecologists concurred in the diagnosis of cystitis and bladder hemorrhage. I had an opportunity to see the patient, but failed to discover any reason for disagreeing with them. A post-mortem, however, at a later period, revealed the actual trouble as a branched calculus of the kidney. The frank rehearsal of such an error does not mean that errors are the rule.

I simply wish to emphasize the importance of a guarded expression as to diagnosis, since even the best observers are at times in error.

That pathologic condition of the bladder which most observers are apt to regard as easiest of diagnosis, viz., stone in the bladder, is often overlooked both by the general practitioner and the surgeon. One negative exploration should never be relied upon as settling the question of absence of a stone. Several repeated examinations under

such as prostatic disease or stricture of the urethra. I have several times found and removed such calculi after competent men had, as a result of one hurried examination, pronounced them to be absent, and in at least one instance where I failed to find the stone I know of its discovery by another surgeon at a subsequent examination.

Growths of the bladder usually cause hemorrhage. With the blood there may appear fragments of papillomatous tissue or necrotic shreds. Necrosis and



Calculus attached to anterior bladder wall; overlooked by a hasty examiner.

favorable circumstances and with the utmost delicacy of touch should be made whenever any of the ordinary signs of bladder irritation give rise to suspicion of the existence of stone. The ordinary searcher employed frequently fails to at first reveal the presence of stone, especially if it be wholly or partially encysted or if covered with mucus. Here the cystoscope is likely to give valuable aid and should never be omitted. Stone most often is overlooked when it com-

pus are more often present if the tumor is malignant and sloughing. A shred of tissue in the eye of the irrigating catheter is often the means of making a satisfactory examination and diagnosis, yet while of value it must not be regarded as decisive of the character of growth. Neither does rapidity or apparent slowness of growth mean much in the differential diagnosis of malignancy. The cystoscopic examination will shed light in some cases, but not in all, and this is especially so when rapid

bleeding from the growth blurs the field of vision and interferes with a prolonged observation. Cancerous growths of the bladder often have a papillomatous fringe develop upon their surface, and fragments of this fringe may give under the microscope no evidence of the underlying malignant tumor.

This was the case in one of my patients last year. I secured fragments which were typically papillomatous. The cystoscopic picture was of swinging polypoid masses only, but when I operated I found this papilloma springing from a hard base, portions of which were sloughy and which seemed to penetrate the surrounding tissues. The malignancy of this case thus established in my mind at the time of operation was confirmed by subsequent rapid recurrence and death. The growth was pronounced by Dr. Axtell to be a cancer. It has been my fortune to have charge of one other such patient, and of another in whom scirrhus cancer originating in the prostate invaded the bladder, penis and testes secondarily. Added to these cases and the one of epithelioma of urethra and bladder base already mentioned this evening are two others, one of cancer of the base in a female and one of primary adenocarcinoma of the prostate invading the bladder, making six cases of cancer of the bladder (primary or secondary) that I have observed. In every instance the invasion began in one of the lower quadrants; in every instance the disease after recognition proved rapidly fatal.

The only hope of operation in such cases is to lessen the pain of frequent urinary acts by providing free drainage. It is fortunate that the disease is so rare, as it entails exquisite torture upon its unfortunate victim,

and is susceptible of but little palliation.

In the operative treatment of growths of the bladder my experience during the last two years has served to confirm me in the belief formerly expressed before this society that the perineal route should be when possible the one chosen. In any event it should always be made use of first, when, if exploration by means of finger and instruments serves to show that it is insufficient, the suprapubic opening may be readily made in addition. This combined method of operation has served me exceedingly well in four cases, and I believe is being advocated more and more by the best operators. For complete excision of the prostate the perineal section enables one to hook the index finger within the sphincter and thus drag down the gland within reach of knife, scissors or dissector, if the enlargement be not too great. If the gland is so large and the perineum so deep that the finger cannot reach within the prostatic collar, this object can be attained by means of a small suprapubic opening just large enough to admit the finger of the other hand, which then presses down from above until the finger already in the wound of the perineum succeeds in hooking itself above the collar. It has been recently proposed to make this suprapubic opening into the peritoneum instead of into the bladder, as superior drainage is thus avoided and the pressure can be equally well applied. Some operators claim that in thin subjects they have been able to apply the necessary pressure through the abdominal wall without opening it.

The non-operative treatment of dis-

ease of the bladder and its neighboring organs, the prostate and the vesicles, is just as important as is the operative. Similarly, it is as necessary to realize what not to do just as much as to know what to do.

Mechanical troubles due to enlarged prostate or to hypertrophy of the bladder walls should have as little instrumental interference as possible while the urine remains aseptic. The administration of urinary antiseptics, such as piperazin, urotropin, cystogen, salol or quinine, should if possible precede instrumentation for several days. Catheterization, when necessary, must be conducted with strict asepsis, and repeated as seldom as possible. Recurrence of complete retention from stricture or disease of the prostate should be made the excuse for early operation by perineal section before the patient becomes exhausted, unless there are

grave counter indications to any operative procedure. Long attempts at catheterization at such times not infrequently result in permanent damage to the deep urethra or in infection of the bladder, with more or less permanent invalidism. Prostatotomy and formation of a low level urethra at such a time is the operation of choice, and in my personal experience has given results that for permanence and satisfaction seem to equal those reported for the Bottini operation.

Bladder irrigation is a palliative measure deserving special consideration. The time for its employment, methods of use, solutions to be chosen and other practical points in connection therewith are deserving of extensive discussion. I therefore only mention it at this time in order that it may not seem to have been overlooked.

Consecutive Oedema of the Larynx.*

By DR. JOHN R. ESPEY, TRINIDAD, COLO.

The subject I have chosen for presentation is one little discussed outside of text-books, and seldom fully treated there. The attention of the general practitioner, however, is liable to be suddenly called to this serious disease by a tragedy occurring in his practice. While it involves an organ the treatment of which has been specialized, the specialist is liable to be of little assistance when we meet it. The reason for

this is that it so frequently occurs as an emergency, and the object of this paper is to grope toward the possibility of an earlier apprehension of the threatened danger that we may be better prepared to meet the emergency. I wish to report a case and take it as the text for a few remarks.

B, a young man just a few days past his seventeenth birthday, called at my office on January 27th with follicular

*Read before the Las Animas Medical Society, March 5, 1900.

tonsillitis. He was of fine physique, had never been ill, and had a good family history. However, as I ascertained afterward, his maternal grandfather had died from some throat trouble of very sudden development, which necessitated tracheotomy, his death occurring twenty-four hours after tracheotomy. There was nothing unusual about the tonsillitis my patient had, and after calling at his home the next day and finding him considerably improved I dismissed the case, with usual precautions as to nursing and remaining indoors. I do not find that these precautions were violated.

On February 1st I was recalled, and found him suffering from lymphangitis of the right cervical glands, but the inflammation of the tonsils had practically subsided. There was considerable tumefaction around the inflamed glands, but no evidence of pus formation. He had a temperature of $102\frac{1}{2}$ degrees, and a pulse of only 72 per minute, strong and full. On the next day his temperature reached 103 degrees, on the 3rd and 4th of February it was 102 degrees, and on the 5th, the day of his death, it was 101 degrees. The pulse rate I never found above 74, and on the 4th it was 68, and always with good volume. During these five days it was difficult to get him to stay in bed, and only part of the time was I able to do so, as notwithstanding the fever he did not feel very sick. He had, however, considerable pain in the inflamed glands. At no time were there any laryngeal symptoms, no difficulty nor stridor in breathing, smothering,

loss of voice, huskiness nor tenderness on phonation.

He was kept on liquid diet and in a warm room with a moderate amount of moisture in the atmosphere.

At no time did I have reason to feel any particular uneasiness as to his final recovery, although I feared the cervical glands would suppurate and cause scarring of his neck. He was a particularly handsome young fellow, and would have regarded this as quite a misfortune. There was, however, no softening of the glands nor chills, and nothing but the temperature, which was fairly regular, to indicate suppuration; nor am I now convinced that it ever occurred, although it is not improbable that there was some breaking down within the glands. When I called on the evening of February 5th at 5 p. m. he was cheerful, said he was feeling decidedly better, had a temperature of 101 degrees, and a strong pulse of 72, and nothing in his condition whatever to call attention to a laryngeal complication. He talked in a strong, clear voice, and breathed apparently without difficulty. I left him feeling that notwithstanding the temperature he was doing fairly well. In three-quarters of an hour I was called over the telephone to come in great haste as they feared he was choking to death. I hastened over, prepared to do tracheotomy, but found him dead, although I was but a few minutes in getting there.

He had, without any complaint, raised up in bed to drink a bowl of milk, had been attacked by sudden choking, sprang from the bed, grasping

his throat and struggling, and within two or three minutes at most—in fact, while his sister telephoned—was dead. These facts I get from a reliable observer who was present. My examination on arrival, made without any section, revealed the fact that he had died from laryngeal œdema, the large, rounded masses completely closing the lumen of the glottis. There had been no rupture of an abscess, and I am convinced that his death was practically coincident with the onset of œdema.

I have been able to find no record of a fatal termination occurring within so short a time. Austin Flint, who finds a parallel for most of our unusual cases, cites a case from Guy's Hospital Reports in 1855, where death occurred within five minutes after the first symptoms of obstruction. You will observe that I prefer to cite this case as consecutive œdema of the larynx, as I cannot think that it was phlegmonous, owing to its sudden occurrence—that is, I think it must have been serum that rushed into the loose tissues, pushing out the relaxed membrane normal to the part and causing strangulation.

Neither can I regard it as œdema of the larynx in the more restricted sense, if that term is to be reserved for those cases occurring in sequence to heart or kidney troubles as any other dropsy may occur. I had a few months previously examined his urine with negative findings, nor was there anything connected with the illness in a formerly healthy young man now suffering with an acute inflammation to allow me to suppose that this was one of the latter cases.

Now, had I been sitting in the room when he was attacked, with instruments ready to perform tracheotomy, it is doubtful if it could have been successfully accomplished in time to save life. He was a muscular young man, and had had training as an athlete, which would have rendered it extremely difficult to accomplish anything while he struggled after jumping from the bed, and at the end of his struggles death must have come very quickly. Thus the sage advice found in all text-books to be prepared for tracheotomy would be useless in such cases as this. The only help would be to foresee and forestall the danger by antecedent tracheotomy, or intubation, if an intubation tube could be retained in the distorted larynx, which is doubtful.

When I was at his bedside less than an hour before his death tracheotomy could easily have been performed, and would undoubtedly have saved his life, as the predisposing malady was not such as we expect otherwise healthy young men to die from.

Of course, his disease was one that is included among the recognized causes of œdematous laryngitis, but as that list includes laryngitis, pharyngitis, tonsillitis, retropharyngeal and cervical abscesses, injuries to the neck, swallowing irritant poisons, erysipelas affecting the neck and throat, and other local causes, as well as a number of general and especially septic diseases, it is evident that we cannot operate on this remote liability.

This brings me to the point I would especially like for you to discuss. Are there any symptoms that in these vari-

ous disorders about the neck might be taken as premonitory of œdema of the larynx before it occurs? If careful observation on the part of the general practitioner could develop such a symptom or symptoms, lives could be saved undoubtedly. In the case I have taken as a text I find but one thing striking as a preliminary symptom, and that is the constant slow, strong pulse, out of all proportion to the fever and inflammation.

Now, I think you will agree with me that this fatal œdema was probably caused by interference with the venous return of the blood by the pressure of the inflamed glands and the tumefaction around them causing an obstruction that brought on the effusion into the lax tissue around or above the glottis. This effusion, I infer, would be rendered more probable by the fact that the heart, acting as a pump, was not acting rapidly and weakly, but was working with a smooth, even force, driving

the blood to the head and extremities with its customary vigor. Under such circumstances any interference with the return flow of the blood would be more liable to result disastrously.

This may appear theoretical, but so strongly has it impressed me that I shall watch for it in case of obstruction to the circulation about the neck, and if it occurs shall regard it as a precautionary symptom. As fatal laryngeal œdema has occurred in the practice of others here, I would like the fact brought out whether this symptom was observed.

The question also arises from this history as to whether there may be a hereditary transmission of a tendency to this form of œdema. As you will observe, the grandfather of my patient died from a similar, perhaps an identical cause.

Families particularly subject to croup we recognize. Is it possible a study of reported cases would show a hereditary tendency to this disease?

Urinary Casts.

By EDWARD C. HILL, M. D., DENVER, COLO.

Tube casts, or cylinders, as is well known, are of prime importance in the diagnosis and prognosis of renal disorders. They are nearly, if not quite, always accompanied by albumin, and are probably products of exudation and epithelial degeneration. Small casts (from the narrow and convoluted tubules) characterize acute and superficial lesions as a rule, while broad casts

(from the straight collecting tabules) are more often observed in well advanced degenerative cases.

The simplest type of casts is the hyaline variety, which is so nearly transparent as to require a dim background for its ready detection. A few hyaline casts, with a trifling amount of albumin are often to be found in transient renal circulatory disturbances, such as

may be caused by a hard bicycle ride, over-eating or over-drinking, mental or physical strain, fevers, lithemia, embolism and ether or chloroform anesthesia. They are also seen in cases of cyanotic kidney, due to passive congestion, and occasionally in anemia, malnutrition and suboxidation, nephrolithiasis, pyelitis, floating kidney, and even with tumors of the bladder. Jaundice may be accompanied by yellow hyaline casts. Chronic interstitial nephritis is manifested by the constant or intermittent occurrence of small numbers of hyaline casts, and still fewer faintly granular ones, along with polyuria and slight albuminuria and distinctive cardio-vascular changes. The bandlike so-called cylindroids are similar in appearance and nearly equal in significance to hyaline casts, but are very much larger. Long, pale, branching, striated mucin bands are always present with excess of mucus, and hence are noted in any dense, acid, irritating urine.

Mixed casts, composed of a hyaline matrix, beset with blood or pus cells, epithelia, nuclei or granules, characterize acute parenchymatous or diffuse nephritis, being found here in large numbers, and also the exacerbations of chronic nephritis. The irregular blood casts proper are likewise noted in renal hemorrhage from any cause, and in small numbers from infarction or marked congestion of the kidney. When retained long in the tubules the corpuscles break down into dark, rusty granules, forming thus rarely hemoglobin casts. Fibrinous casts are simply blood-stained hyaline moulds, and are

of common occurrence after hemorrhagic nephritis. Irregular, yellow-brown pseudo casts of wavy fibrin may be found in many forms of hematuria. Castlike conglomerations of pus cells are significant of renal abscess, but one should not mistake for these groups the larger clumps due to pyelitis or leucorrhea.

Granular casts denote most often sub-acute or chronic parenchymatous nephritis, especially when accompanied by considerable albumin and dropsy. The coarser the granulations the more acute is the disease—the finer, the more chronic. These finely granulo-hyaline casts are often observed in the same conditions as simple hyaline casts—for instance, in uric-acidemia. Coarsely granular casts have been observed in renal cysts. Brownish blood-stained granular casts are sometimes encountered in scurvy, hemophilia and other blood dyscrasias and in hemorrhagic nephritis.

Fatty casts are formed secondarily from granular and epithelial casts, and indicate always a chronic degenerative condition. The fat globules embedded in these casts are very readily recognized by their glistening and highly refractive appearance. Fatty casts are most abundant in the large white kidney of very chronic nephritis. Irregular castlike conglomerations of fat drops, accompanied at times by fatty acid needles, are sometimes met with in renal abscess, fracture of the long bones and in poisoning by phosphorus, arsenic, antimony and iodoform.

Waxy or amyloid casts appear as

highly refractive, yellowish, often cloudy, wavy and fluted cylinders. They are quite brittle, hence often much broken and irregular. They are attacked hardly at all by acetic acid, which is a further distinction from the hyaline cylinders. Some of them, when retained for a long time in the tubules, give the anyloid reaction—a mahogany color with a dilute solution of iodopotassic iodide, turning to a dirty violet on addition of dilute sulphuric acid. Waxy fragments may be found in subacute and chronic parenchymatous nephritis and in renal amyloidosis, which last is usually accompanied by amyloid liver and spleen.

Bacterial casts in freshly passed urine are suggestive of interstitial suppurative nephritis or an ascending pyelonephritis. Similar groups of micrococci deposited on mucous threads are apt to occur in any urine that has stood for some hours, particularly in warm weather. These casts resemble somewhat pale granular casts, and are very resistant even to strong chemical reagents.

Deposits of urates on mucin bands and hyaline cylinders give rise to yellowish, pink or reddish-brown castlike formations, which have been at times mistaken for granular casts. These conglomerations may consist either of amorphous urates or of the crystalline urates of sodium or ammonium. They are readily distinguished from granular casts by the fact of disappearing when warmed or treated with alkali. Uratic pseudo-casts are of frequent occurrence in the concentrated urine of lithemic persons, especially infants and children. Similar concretions may be observed occasionally in any cold, dense acid urine, with "brick-dust" deposit of urates. From the above brief resume it will be noted: (1) That tube-casts have general as well as local significance; (2) that no one type is in itself pathognomonic of a single definite lesion; (3) that the various types are pathologically and clinically progressive, changing with the stages of the underlying disease, according to its particular nature.

Injuries to the Eye from Accidents in the Mine.

BY MELVILLE BLACK, M. D., DENVER, COLO.
Professor of Ophthalmology and Otology, Gross Medical College.

(Continued from the May number.)

CHAPTER IV.

Injuries to the Conjunctiva.

INJURIES TO THE CONJUNCTIVA.

It is to be remembered that the conjunctiva is a mucous membrane that lines the inner surfaces of the lids, and

is reflected from them onto the eyeball. That portion lining the lids is firmly attached to the tissues beneath it, and is known as the palpebral conjunctiva.

That part covering the anterior portion of the eyeball is loosely attached to the underlying episcleral tissues, and is known as the ocular conjunctiva. The epithelial layer is reflected over the cornea, to which it is firmly attached. The function of the conjunctiva is that of forming a perfectly smooth moist membrane, that will permit movement of the eyeball without friction or irritation, and of providing lubricant material for the moistening of the cornea during the act of winking. Any extensive injury to this membrane is so liable to alter its function temporarily or permanently that the patient will be painfully aware of its disability. Hence it becomes our duty to treat it with great respect, and to preserve it as far as lies in our power.

Foreign bodies, such as dirt, cinders, particles of rock, flying grains of emery, sand and steel become easily embedded in the palpebral conjunctiva, and are only detected by everting the lids. They are easily removed with a cotton-wound toothpick. To prepare this toothpick wind upon the end of it a thin film of cotton, and dip it in water or preferably some antiseptic solution. The advantage of the cotton-wound toothpick over a foreign body spud is that the foreign body becomes engaged in the meshes of the cotton, and does not fall back into the eye when loosened from its point of attachment. Foreign bodies lying loose in the conjunctival fornix are easily removed by pulling the lid away from the globe and flushing the eye with a normal salt solution. Wounds of the conjunctiva usually re-

quire but little attention, as they heal kindly if the eye is kept quiet under an antiseptic dressing. If the wound is extensive, it is well to approximate its edges with as few sutures as possible.

From my introductory remarks it would seem that slight damage to the conjunctiva would of necessity lead to all kinds of disastrous results. This is true of only such injuries as tend to destroy the conjunctiva in whole or part, such injuries as are sustained from the *burns of lime, acids, fire, etc.* Such burns produce a conjunctival inflammation of a plastic form, with a tendency to the formation of adhesions between the ocular and palpebral surfaces leading to symblepharon, and sometimes to adhesion of the free margin of the lids to each other (Ankilosymblepharon). Therefore, in the management of a conjunctival burn our aim should be to prevent the union of any of these opposing surfaces. If the cul-de-sac is burned it is very difficult to prevent union at its deepest portion, and a consequent further union of the adjacent tissues with final obliteration of the conjunctival sac. This is especially true of the lower cul-de-sac. It is very unusual for the upper cul-de-sac to be extensively burned because of its ample protection by the upper lid.

The first thing to do for a burn of the conjunctiva, no matter from what cause, is to instil oil into the conjunctival sac. Pure castor oil is the least irritating. Pledgets of lint or linen, about two inches square and of several thicknesses of the material, should be

cooled upon a block of ice. One of these cold pledgets should be applied to the eye and allowed to remain about one minute, and then replaced by a fresh one from the ice. These applications should be continued as long as they give comfort. The oil is to be freely used every hour. To relieve pain a one per cent. solution of holocain can be used every few hours. If adhesions tend to form between the opposing conjunctival surfaces they should be broken up twice daily with a silver probe. If it is found that the adhesion of the surfaces cannot be prevented by this means, I have found that the application of egg film between the raw surfaces will often prevent their adhering. The egg film should be sufficiently large, and if difficulty is experienced in getting it to remain in position, make it large enough to cover the whole front of the eyeball. For this purpose take the film from the small end of the egg, and it will be

found to have almost the same shape as the front of the eyeball, and will fit over it with but little wrinkling. Dr. D. H. Coover was the first, so far as I know, to use the egg film in eye surgery, and we are greatly indebted to him for the suggestion of its use in this field. The egg film being an animal membrane, it should be applied fresh between granulating surfaces at least every forty-eight hours.

Powder burns. Grains of powder lodged in the ocular conjunctiva cannot be picked out as in most situations. This is because of the loose attachment of the conjunctiva. The conjunctiva should be picked up with a pair of delicate forceps at the site of the powder deposit and snipped off with a pair of scissors. The powder deposit is thus removed with the loss of a small bit of conjunctiva. The little wound soon closes and no damage is done.

CHAPTER V.

Injuries to the Cornea.

Corneal injuries are serious because they tend to leave scars, which in turn damage vision. Superficial injuries, involving the epithelial layer only, heal without leaving an opacity, but where the deeper structures of the cornea are involved in the wound, an opaque scar is the result.

Scars in the cornea cause irregular astigmatism, and from this condition vision may be more greatly damaged than the appearance of the part would indicate. Septic germs find in the cornea a fertile field for cultivation, hence

it is important that all precautions be taken against infection.

Foreign bodies on the cornea. Extraordinary vision is not required to locate the situation of a foreign body on the cornea. If the iris is of light color and the foreign body dark, or if the iris is dark and the foreign body light in color, its presence is easily detected; but if the reverse obtains, i. e., a light colored iris and a light colored foreign body, or a dark colored iris and a black foreign body, more patience is required for its detection. A piece of glass or a

clear piece of sand, when embedded in the cornea, is so nearly like the cornea in its appearance that its detection is best determined by the presence of a fixed raised surface on the cornea, or a disturbance of its continuity. The examiner in this case must place himself in position to get the reflected light from the cornea. If the foreign body is very small, it will be necessary to use a lens for focal illumination. The source of illumination should be artificial light. The lens should have a focal distance of about three inches. If the right eye is the one injured, the light should be about two feet to the patient's right and about a foot in front of him. The examiner should stand from twelve to sixteen inches from the eye under examination, and to its left. The lens should be held between the light and the eye examined, and about three inches and a half distant from the latter, so that the rays of the light will fall upon the cornea slightly out of focus, when, as the lens is moved about, the cornea will have a slightly hazy appearance. The foreign body will stand out with great prominence in the hazy zone of illuminated cornea. If a still more sensitive test is required, a second lens may be used to magnify the part under examination. This will render the foreign body several times larger than it really is, and make it still easier of detection. Unless the examiner is very expert he will find a lens for magnifying that has a focal distance of from four to six inches the most serviceable. Two such lenses as mentioned should be carried constantly by every surgeon who

is frequently called upon to remove foreign bodies from the cornea. I dwell especially upon the method of examination for the detection of foreign bodies on the cornea, because they are so frequently overlooked by physicians, only to be detected by some layman after the physician has failed.

A foreign body embedding itself in the cornea may give little disturbance for several hours. This is especially true if it is lodged near the periphery, below or at its sides, or if it is sunken into the substance of the cornea sufficiently far not to project above its surface and scratch the palpebral conjunctiva during the act of winking. If the foreign body is of a nature to undergo oxidation by its passage through the air to the eye, it becomes hot and is in a measure rendered aseptic. It will be found embedded in a zone of burned cornea. In this condition it may remain many days before it will be thrown off by nature's method. The cornea tends to get rid of these offending particles of foreign matter by a process of retrograde metamorphosis. The corneal substance about the foreign particle becomes softened, the body is no longer afforded good support, and finally drops out of its bed into the conjunctival sac and is washed away by a flow of tears. In its former site there will now be found what may be termed an ulcer. We have a focus of infection which may or may not undergo resolution. This will depend upon the nature and extent of the infection. Before the activity of the septic process can be arrested serious damage to vis-

ion may ensue. The possibilities of infection to the lacerated corneal substance are very great. The infection may be so extensive as to produce not only ulceration, but corneal abscess, or even ophthalmitis. Local diseases of the eye, especially of the tear passages, are capable of infecting a corneal wound of any kind, no matter how simple an injury it may seem. Some of the worst cases of corneal infection I have ever seen have been very simple corneal injuries infected by purulent inflammation of the lachrymal passages. We are never justified in treating a case of foreign body on the cornea as a trivial affection, especially when former attempts have been made to remove it, or when local diseased conditions of the conjunctiva or lachrymal passages are active. It is much safer to make a guarded prognosis, and at the same time take every antiseptic precaution against infection. Where a foreign body has been embedded in the cornea for several days the same guarded prognosis should be given, as it is more than probable that infection has taken place, rendering complications possible. It is to be remembered that infection is liable to occur from the impaction of any foreign body on the cornea, no matter how simple an injury it may seem. Therefore, to be on the safe side, it is well to always take advantage of all antiseptic precautions against infection.

The removal of a foreign body from the cornea should always be preceded by thorough cleansing of the eyelids and surrounding parts. The eyelashes,

particularly, should be freed of all foreign matter by vigorous wiping with pledgets of cotton squeezed out of 1-5000 bichloride of mercury solution. A few drops of a 1 per cent. solution of holocain should now be instilled into the conjunctival sac and upon the cornea. Holocain is preferable to cocaine because it is antiseptic, does not destroy the corneal epithelium, and does not dilate the pupil nor affect the accommodation. The conjunctival sac may now be flushed with a 1-5000 solution of bichloride of mercury and the cornea wiped gently with a piece of cotton dipped in the same solution. The removal of the foreign body should first be attempted with a cotton-wound toothpick. If the foreign body is loosely embedded and has sharp edges, it will be engaged in the meshes of the cotton and come away readily without falling back into the eye. The same cotton-wound toothpick may be used to wipe out the indentation made by the foreign body, unless it is found that the site has a charred or blackened wall, in which event a blunt foreign body spud should be used as a curette for the removal of the deposit. The eye should now be covered with the wet bichloride dressing. This dressing should be removed in from twelve to twenty-four hours, when, if the cornea has not been too extensively wounded, healing will be found to have taken place. In event of its not having done so, a dry dressing should be substituted, or the eye kept closed until it is healed.

Where we have to contend with an infected focus of inflammation about

the foreign body, the same preliminary steps should be taken, the foreign body removed with a spud and the same instrument used to remove the softened tissue in which the foreign body has been lying. A toothpick is prepared as for the removal of a foreign body. This is dipped in pure carbolic acid, the excess removed by pressing it against a towel, and the infected spot cauterized. A drop of 1 per cent. solution of atropine is instilled into the eye, and the wet bichloride dressing applied. This dressing should be changed daily, the lids freed from secretion, and atropine instilled into the eye. As soon as the eye gives evidence of being out of danger, the wet dressing can be discontinued and replaced by a dry cotton dressing. This is to be continued until the eye is fully healed. If the infected focus does not show a disposition to undergo resolution, nosophen should be dusted over it. The atropine should be continued in each dressing so long as there is ciliary congestion. It will sometimes be found necessary, because of increase of the intra-ocular tension to use a one-fourth of 1 per cent. solution of eserine.

When foreign bodies in the cornea are very small and very deeply embedded, a great deal of patience must be exercised. A sharp spud is often recommended for their removal. It is a dangerous instrument, however, and the blunt spud is infinitely safer, and I have yet to see a foreign body that I could not remove with it.

When infection has been extensive and the eye neglected, with resulting

corneal ulceration or abscess formation with or without hypopion, or where ophthalmitis or panophthalmitis has set in, such processes are to be handled in the manner hereafter described.

Incised wounds of the cornea. If the wound does not penetrate the cornea, little treatment is indicated beyond permitting the healing to take place under the most favorable conditions. The eye should be thoroughly cleansed and the wet bichloride dressing applied. This dressing should be changed once a day, at which time the secretion should be wiped away from between the lids.

If the wound has penetrated the cornea the complications may render the injury an exceedingly dangerous one. The iris is almost sure to prolapse through the corneal wound, and it must be replaced or excised. It may be pushed back into the anterior chamber, and made to stay if the corneal wound is very small, but if the wound in the cornea is large it is almost certain to prolapse again. The safer plan in all cases is to grasp the iris with a pair of iris forceps, make slight traction upon it and cut it off with scissors close to the cornea. Any portion of iris still remaining in the wound are to be pushed back into the anterior chamber where they will remain.

The reason why it is so important that the iris should not be left to heal in the corneal wound is because of the many dangers to which the eye will be subjected in consequence. This will be dealt with more fully further on.

A penetrating wound of the cornea

may prove insignificant in comparison with the damage which the interior of the eye has sustained. If the interior of the eye has been injured the treatment of the eye will be subservient to the management of the deeper injuries. For example, iced cloths are frequently indicated in intra-ocular traumatism, but would be contraindicated in a simple corneal wound, because of the cold interfering with the corneal nutrition. Again, the injury to the interior of the eye through a corneal wound might be so extensive as to demand enucleation of the eye, hence the point is made that a penetrating wound of the cornea may serve only to direct the attention of the operator to the injury of more delicate structures lying beneath it.

In a few instances of simple penetrating wound of the cornea, where great gaping of the wound was present, I have placed one or more sutures in it to great advantage. Suturing the cornea is difficult. The needles should have a full curve, and should be of the smallest size. The silk should be the finest made. Precautions should be taken not to introduce the needle through the posterior layer of the cornea, and in introducing it into the opposite lip of the wound it should be placed anterior to the posterior layer. The object in so doing is to avoid dragging the iris into the needle wound with the silk as it is pulled home. The sutures should be removed in from four to five days.

It is usually advisable to drop a 1 per cent. solution of atropine into an eye suffering from a penetrating wound of

the cornea every three to six hours. Atropine dilates the pupil, paralyzes the accommodation, and is supposed to act as a local anodyne. If much pain is present a 1 per cent solution of holocain dropped into the eye every few hours will be found to relieve it. Eserine, which has just the opposite effect of atropine, is sometimes indicated to cause contraction of the pupil, or to relieve intraocular tension. It is to be remembered that as long as the corneal wound leaks, as is indicated by an empty anterior chamber, neither atropine nor eserine will have any action on the pupil.

If the lens has been injured and undergoes much swelling, as it will certainly do if much injured, the tension of the eye will become increased unless the corneal wound leaks or is ruptured afresh from the internal pressure. In such conditions it becomes advisable to extract the lens. See chapter on "Injuries to the lens."

Infection of a corneal wound may lead to most serious consequences, such as suppurative inflammation of the cornea, or even of the entire globe.

Corneal infection is evidenced by pain in the eye, or over the eye, by signs of increased injection of the circumcorneal blood vessels, by a milky appearance of the cornea, the presence of pus in the wound, or by the presence of pus in the anterior chamber. The prognosis is exceedingly grave. It is rarely possible to avoid a long siege of inflammatory reaction, with a sightless eye as the outcome.

The treatment of infection of a cor-

neal wound is to apply pure carbolic acid to the wound at once, and neutralize it at once with pure alcohol. The cotton-bound toothpick makes a most excellent applicator for both the acid and the alcohol. Care should be taken to confine both applications to the infected wound. Hot applications continuously applied for ten minutes out of every hour will promote nutrition of the part and very greatly relieve the pain. Atropine is indicated for its cy-

cloplegic and anodyne properties; holocain for its local anesthetic and antiseptic properties. Saturated solution of boric acid, as a wash, should be used every few hours to remove all secretion from the eye. 1-2000 solution of formalin should be dropped upon the cornea every six hours for its powerful antiseptic effect. Before using the latter drop in a few drops of 1 per cent solution of holocain to reduce the extreme smarting from the formalin.

(To be continued.)

SELECTED ARTICLE.

Medicine as a Business Proposition.*

By G. FRANK LYDSTON, M. D.

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So live that when thy time has come to join the innumerable caravan which moves to that mysterious bourne peopled by doctors who have died of innutrition, thou go not like the general practitioner called at night, scourged from his office, but, sustained and soothed by the motto "Never trust," approach thy grave like one who wraps his stocks and bonds about him and lies down to pleasant dreams.†

Some months since I had the honor of addressing a medical club of Chicago, composed of prominent general practitioners. I chose for my theme "The Business Aspect of Medicine." The resulting discussion was so animated, and the participants were so in-

terested in the subject, that I promised to amplify and publish my remarks—a promise that for many and sufficient reasons I have hitherto been unable to keep.

That there are a number of points in this address on which many of my professional brethren will differ with me—possibly with some degree of warmth—I am well aware. Having, however, the material welfare of the profession at heart, and believing that the ventilation of truths—even unpleasant ones—is healthful in the end, I will proceed as though expecting only favorable criticism.

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*Lecture delivered at the public meeting of the St. Joseph County Medical Society, South Bend, Ind., January 30, 1900.

†With apologies to the shade of W. C. B.

FINANCIAL REWARDS OF THE PRACTICE
OF MEDICINE.

As a general proposition it is safe to assert that the practice of medicine from a business standpoint is a failure. The successful exceptions merely prove the rule. It is also safe to assume that the elements of financial non-success are cumulative in their action—a fact that is easily proved by hospital and dispensary statistics. The average income of the physician is less than that of the high-class artisan, the telegraph operator in an important office; and far less than that of the wide-awake commercial traveler. This, like many other points that will follow it, is threshing over old straw, but such threshing is unavoidable.

The practitioner of medicine, like every man who relies on his own hand and brain for a livelihood, is entitled to a bit of earth that he and his may call their own, at least a modest competence, and a well-earned rest when his sun begins to set and the twilight of his life approaches. How many doctors are in a position to enjoy or even render less awesome their twilight days? As city doctors are all supposed to be rich—at least by the public, that does all it can to prevent their becoming so—it would be interesting to know what proportion of them, even in metropolitan medical centers, own their own homes or have property investments. A far smaller proportion than is just, I fancy.

The assertion has been made that the general poverty of the medical profession is due to a lack of appreciation and a contempt for the rights of the medical

man on the part of the public at large. This, however, is a secondary matter which, being self-evident, overshadows the primary cause—the asinine stupidity of the profession itself. As a broad general proposition the reputable profession as a whole has about as much sense as the dodo, and unless signs fail, will, sooner or later, meet the fate of that remarkable bird. How the profession can expect the respect and appreciation of the public when it has no respect or appreciation for itself is difficult of conjecture. The public can not be expected to keep clean the nest of the medical dodo. Furthermore, the public quite rationally values the stupid thing according to its self-appraisal.

Primarily, the practice of medicine is supposed to be founded on a mawkish, blanket-like sentiment of philanthropy, which is expected to cover both God's and the devil's patients—the pauper and the dead-beat—the honest man and the rascal—the rich and poor alike. The doctor is expected to wallow eye-deep in the milk of human kindness, scattering it broadcast for the benefit of humanity, but he is in no wise expected to even absorb a little of it, much less to swallow a gulp or two occasionally for his own benefit. By way of piling Pelion upon Ossa, the public, having discovered that the doctor sets little value on his own services, proceeds to eye him with suspicion; the tradesman is very careful how he trusts doctors. Of course, the tradesman has his own family physician “hung up” for a goodly sum, but—knowing doctors to be poor business

men—the tradesman often cheats them in both the quality and price of goods. It is a great and goodly game that plays from both ends and catches the victim in the middle. The tradesman has one redeeming feature, however; he does his best to teach his doctor patrons a lesson. He either sends his goods C. O. D. or, if the doctor be one of the favored ones, he finds the bill in his mail bright and early on the 1st of the month. I often think my tradesmen must sit up all night in order to get their bills in bright and early on the 1st. If not paid by the 15th, a collector is usually at the doctor's office to see about it. Yet the professional dodo—my apologies to the shade of the “sure enough” dodo—will not learn. He goes on and on, neglecting his accounts, mainly because he is afraid of offending his patrons and driving them off to some other doctor who isn't so particular; and the worst of it is, there are plenty of contemptible fellows who draw their own salaries promptly when due, or present their bills for goods with frantic haste, who consider a doctor's bill a flagrant insult. Will nothing ever inspire the doctor with courage enough to despise and ignore such contemptible trash? Does he prefer the role of a lickspittle to that of an independent and self-reliant man?

As illustrations of the value the profession sets on its skill and learning, the amount of gratuitous work done is striking. Our pauper—or pauperized patrons—are divided into several classes, viz: 1. The free hospital, clinic and dispensary class. This is on the

increase. According to Dr. Frederick Holme Wiggin 51 per cent. of all cases of sickness in New York City are now classed medically as paupers, as against 1.5 per cent. twenty years ago! This is appalling. Of these alleged paupers it is safe to say that 75 per cent. are able to pay full or at least fairly good fees. Why should pauperism be shown so prominently in the matter of medical bills, as compared with other necessities of life? And why should the profession carry a burden that belongs to the public? 2. Free patients of the private class: *a*, those who can pay but will not, i. e., dead-beats and swindlers; *b*, persons whose circumstances are such that the doctor feels in duty bound to render no bills; *c*, persons who presume upon social acquaintance with the doctor to “hold him up” for friendly, perhaps informal, consultations.

* * *

FALSE PRETENSES OF PROSPERITY.

One of the most potent causes of professional poverty is the mania of the doctor for a pretense of well-doing. He exhibits this in many ways. One of the most pernicious is an affectation of contempt for money. This it is that often impels him to delay the rendering of his accounts. Oftentimes his patient offers to pay all or part of his bill. With a lordly and opulent wave of his marmalade hand the doctor says, “Oh, that's all right; any time 'll do.” And the triple-plated medical imbecile goes on his way with a dignified strut that ill befits the aching void in his epigastric region, and is decidedly out of harmony

with the befringed extremities of his trousers. And then the doctor apologises to himself on the ground of a philanthropy that is but the rankest and most asinine egotism *en masque*. When will the doctor understand that payment deferred maketh the patient dishonest? When will he consider the necessities of his wife and children as outweighing the feelings of the patient who owes him money? When will he be a man, and not a time-server and truckler to appearances? He would take the money did he not fear the patient might suspect that his doctor was not prosperous. He wishes the patient to think that the doctor and his family dine with the chamelions, or are fed by ravens. Yet the medical Elijah waiteth in vain for the manna-bearing birds—they know him for what he is, a counterfeit prophet who vainly yearns for the flesh pots of Egypt—who has a ponderous and all-consuming desire for pabulum, and a microcephalic capacity for finance.

A large proportion of the profession in cities carries its false pretense of prosperity into all the affairs of life. An expensive establishment in a swell locality, a turnout that shall be the envy of all his competitors, the opera, social events galore, expensive dinners, subscriptions to this, that and the other thing in which he has, or should have, no concern—such is the system of blackmail that the doctor often allows to be levied on himself by that hydra-headed, brainless bugaboo termed “society.” He submits to the blackmail because he is afraid society will think he is not pros-

perous unless he makes a splendid appearance, “and,” he says to himself, apologetically, “they don’t want a fellow who isn’t prosperous, you know.” A yearly trip to Europe or some swell resort comes in by way of trimming, and before our aspiring friend is done with his tribute to “society,” he finds that he has more than he can do to make ends meet. If he only had the spirit of a Vanderbilt, it would do him as good a turn as would quite a bit of that gentleman’s money, for he would say “society be d—d,” and forthwith stand on his own bottom.

The gilded show of prosperity reacts against the doctor’s interests in the same way as his refusal to accept money—the patient, judging by externals, thinks the doctor doesn’t need money, hence tardily, if ever, pays his bills.

One of the worst results of a pretense of opulence on the part of the doctor is the inducement it offers to foolish young men to enter the profession. Thinking that doctors make their money easily, and plenty of money at that, young fellows, often illy-adapted to medicine, are frequently induced to join the already over-crowded ranks of the profession.

Speaking further of catering to appearances, how often the struggling young doctor takes unto himself a partner in his poverty, by marrying. Society has an unwritten law that unmarried doctors are not *au fait*. The young doctor feels that way too—and there is usually a sweet girl somewhere who agrees with him—but he doesn’t see how he is to support a wife. However,

he yields to the pressure of social custom and—two miserable people stand where one stood before. How long will it be before the profession meets the prevalent social opinion on the marriage of doctors with the contempt it deserves? The doctor, of all men, should not marry until he is well over the breakers and into the sea of prosperity. Any other view is mere twaddle, and founded on mawkish sentimentality and a strabismic notion of propriety. The doctor should disregard the opinions of the old women of society—whether the old women be with or without trousers. Why should he be disturbed by the raucous ruminations of these “psychic humpbacks.”

* * *

COLLEGE, HOSPITAL AND DISPENSARY EVILS.

It is rather a delicate matter, perhaps, for a college professor to touch on the evils of medical colleges in their relation to the business aspect of medicine, but I shall nevertheless speak plainly and to the point. While theoretically the better class of medical colleges were founded solely for the advancement of science, it is none the less true that self-aggrandizement has been the pedestal on which most of our disinterested giants in the teaching arena have stood, and are standing. Remove the personal selfish interest of college teachers and most of our schools would be compelled to close for lack of instructors. Let us be honest with ourselves, please. Not that self-interest is reprehensible—I hold the contrary. One may teach for salary, reputation, the

love of teaching, or a desire for self-improvement, it matters not, for if he be of the proper timber he is the right man in the right place. Self-interest makes better teachers on the average than philanthropy, providing the primal material is good.

Granting that self-interest is the mainspring of the college professor, is he very “long-headed” from a business standpoint? I submit the following propositions as proving that the average college professor defeats his own ends: 1. He devotes to teaching time and labor over and above the exigencies of ordinary practice which, if devoted to cultivating the good will of the laity, would be much more profitable. 2. While cultivating the acquaintance and friendship of the alumni of his own school—a few each year—he alienates from himself the friendship of every alumnus of every rival school, the instant he begins teaching. 3. He assists in educating and starting in life, young, active competitors to himself. 4. He is compelled to devote a large percentage of his time to the gratuitous relief of medical students and physicians. He may give his time cheerfully but he yields up his nerve force just the same. 5. Most college professors are less successful in the long run than the more fortunate ones of the rank and file who have never aspired to teaching honors. 6. Greater demands are made on a professor's purse than if he were in the non-teaching ranks of medicine. He, more than all others, is expected to put up a prosperous appearance.

The college clinic—especially of the

surgical sort—is far-reaching in its detrimental effects on professional prosperity. Few or no questions are asked, and the millionaire is being operated on daily, side by side with the pauper, free. And the blame does not always lie with the professor who runs the clinic. General practitioners bring patients to the free clinics every day, with full cognizance of their ability to pay well. Why doctors will persist in thus cheapening surgical art is difficult of conjecture—but they do it just the same.

Of course, the college clinic is supposed to be a theater of instruction. Often, however, it is but a stage on which comedy-dramas are enacted. A brilliant operation that nobody six feet away can see, and an operator bellowing at his audience like the traditional bull of Basham—in medical terms that confuse but do not enlighten, terms that are Greek to most of the listeners—this is the little comedy-drama that is enacted for students who have eyes but see not; who have ears but hear not. Instruction? Bah! Take the theater elements, and the plays to the gallery, out of some college clinics and there would not be a corporal's guard in attendance.

Worse than the free clinics are the so-called charitable hospitals. Much has been said of dispensary abuses, but few have had the courage to say anything in adverse criticism of these institutions. While nominally founded to fill "a long-felt want"—and the number of long-felt wants from the hospital standpoint is legion—these hospitals are founded on strictly business princi-

ples, save in this respect—the people who found them feed on their innate capacity to get something for nothing. The first thing the founders do is to get a staff of doctors to pull the hospital chestnuts out of the fire. The members of the staff think that the hospital is performing the same duty for them, and everything is serene. And so the surgeon goes on operating on twenty patients—fifteen of whom are able to pay him a fee—in the hope that one among them all is *willing* to pay him a fee. Exaggeration? Well, I can not swear to the accuracy of the foregoing, but an eastern surgeon of world-wide fame once told me that for every patient who paid him a fee he operated on nineteen for nothing; and this man has no public clinic, either. Is it conceivable that the nineteen free patients are all paupers? Many of them go to my friend for operation, from very long distances. Ought the railroads and hospitals to have all the profits? Have we not all had similar experiences in a lesser degree? With the development of charitable hospitals far in excess of any legitimate demand, it has come to pass that surgery is almost a thing unknown in general city practice. Even the minor operations have left the general practitioner—to return no more so long as there are free hospitals and dispensaries. Where is the emergency surgery, of which in former days every practitioner had his share? Railroaded off to the "charity" hospitals to be cared for gratis.

In a recent conversation with a practitioner of thirty years' experience, I

said, "Doctor, you used to do a great deal of general surgery throughout this section of the city. Have the hospitals affected your practice in that direction to any extent?" He replied, "Surgery with me is a thing of the past. Even emergency cases are carted off to the nearest hospital. If by chance one does fall into my hands, it is taken away from me as soon as I have done the 'first-aid' work." Personally I see very little use in teaching surgery to the majority of students who intend to practice in our large cities—they will have little use for surgical knowledge.

Here are three cases in illustration of the way our "charitable" hospitals antagonize the business interests of the profession:

1. A very wealthy farmer engaged me to perform an exceedingly important operation. It was understood that \$1,000 was to be the honorarium. He was afterwards advised to go to a certain "religious" hospital where he was operated on by an eminent surgeon who received nothing for his services. The patient paid \$15 a week for hospital accommodation, and \$25 a day to his family physician, who remained with him "for company." What a harmonious understanding between the patient and his family doctor—and what a "soft mark" that surgeon was. I had the pleasure of telling the latter of the gold mine he didn't find, some time later, and the shock to his system amply revenged the body surgical.

2. A patient who was under my care for some weeks and paid me an excel-

lent fee, finally divulged the fact that he had meanwhile been living at a certain hospital as an "out patient," at an expense of \$8 a week. He had become dissatisfied with the hospital attention, he said, and, pretending great improvement, was permitted to get about out-of-doors.

3. A man on whom I operated and who paid me my full fee without argument or question, came to me directly from one of our large hospitals, where he had been sojourning for several months. That medical men in hospitals are imposed on is a trite observation. So long, however, as it appears to be the doctor's advantage to be on a hospital staff, plenty of men will be found who will be glad of the chance. As for the injury which the system inflicts on the profession at large, that is no argument with the individual. Human nature operates here as elsewhere. Knowing that the system is bad, we are all anxious to become victims.

In recommending the payment of salaries to hospital men, a recent editorial* claimed that such a plan will remedy all the evils incident to the professional side of hospital management. I do not agree in the opinion that the payment of salaries to the staffs of institutions for the care of the sick will alone correct the evils of such institutions. The writer of the aforesaid editorial is incorrect, also, when he says that an awakening is at hand. No, not at hand; it is coming though; the handwriting is on the wall. When the revolution does come, this is what will happen: 1. Hos-

*Cleveland Jour. Med. Sept. 15, 1898.

pital physicians and surgeons will be paid salaries. 2. Hospitals will take as free patients or patients who pay the hospital alone only such persons as rigid investigation has shown to be indigent. All others will be compelled to pay their medical attendants just as in private practice. 3. Certificates of indigency will be required of every free patient, such certificate being signed by the patient's attending physician—outside of the hospital—and at least two other persons in the community where he or she resides. 4. General and especially country practitioners will cease to deceive hospital doctors as to the circumstances of their patients. One medical man should not impose on another.

Too much trouble, eh? Well, my friends of the hospital and dispensary—for the same charges should apply to the latter—you must either take your medicine or the revolution will go farther and this is what will happen: The profession at large will boycott every man who runs a college clinic, and every hospital and dispensary man. It will fight colleges and hospitals to the bitter end.

* * *

MEDICAL "TIN-GODS."

One of the most vital flaws in the business sense of the general practitioner is his penchant for hero worship. He hears of the medical tin god from afar, and burns incense on the altar of his greatness. The great man pats the humble doctor on the back, calls him a good boy, and tells him just where to take all his cases. Sometimes he offers to divide fees with him.

The medical tin god is truly a "self-made man in love with his maker." He has "genius stamped upon his brow—writ there by himself." His evolution is interesting. It is history repeating itself; Apsethus the Libyan wished to become a god. Despairing of doing so, he did the next best thing—he made people believe he was a god. He captured a large number of parrots in the Libyan forests, and confined them in cages. Day after day he taught them to repeat, "Apsethus the Libyan is a god," over and over again. The parrots' lesson learned, Apsethus set them free. They flew far away, even into Greece. And people coming to view the strange birds, heard them say, "Apsethus, the Libyan, is a god; Apsethus, the Libyan, is a god." And the people cried "Apsethus, the Libyan, is a god; let us worship Apsethus, the Libyan." Thus was founded the first post-graduate school.

The medical Apsethus and the deluded parrots of the medical rank and file are here, and here to stay, until both are starved out. And the modest general practitioner looks up to the medical tin god and wonders "upon what meat does this our Cæsar feed that he hath grown so great?" The meat of industry? Perhaps. The meat of prodigious cerebral development? Seldom. The meat of opportunity? Yea, yea, my struggling brother, "and the devil take the hindmost." But, more than all, he hath fed on the meat that the parrots have brought him—Elijah's ravens were not a circumstance to those parrots. "In the kingdom of the blind, the

one-eyed man is king." How long will the general practitioner continue to play parrot to the medical tin god of the charitable hospital, the very existence of which is a menace to the best interests of the profession—the profession for which the institution has no charity? In that happy time to be, there will be no tin gods. There will be a more equable division of work, and every prosperous community will have its up-to-date private hospitals with up-to-date men at the head of them. As for the post-graduate teacher—good or bad—he is already defeating his own ends—he is exciting ambitions in the breasts of his pupils. Here and there among them is an embryo McDowell, a Sims, or a Battey. The backwoods country produces good rich blood and virile brains. And the Sims, and McDowells, and Batteys of the future will be found in relatively small places, doing good work, and then—good-bye to the tin god and his horn, "for whosoever bloweth not his own horn, the same shall not be blown." And in that day the parrot shall evolve into an eagle, and the hawk had best have an eye to windward. Meanwhile, hurrah for the post-graduate school and its pupils, and more power to the tin gods.

—*Jour. A. M. A.*

PARENTAL RELATIONS.

One of the teachers in the Sunday school of the First Methodist Episcopal church of Germantown was endeavoring to instill into the little girls of her class recently a due appreciation of parental affection. She spoke of the mother's

love for her children and of the respect which the children should show to the mother. For some reason she rather omitted to lay as much stress upon the father. Finally one of the little girls remarked that she thought children should love their mothers much more than their fathers.

"Why do you think that?" asked the teacher.

"Oh, well," said the little tot, "your fathers are only related to you by marriage, but your mothers are related to you by bornation!"—*Philadelphia Record.*

A GOOD THING TO CHERISH.

Former Governor Bradbury of Augusta, for some time Maine's chief executive, is still living in his old home, and, although nearly a century old, is hale and hearty, says a Washington correspondent of the *New York Tribune*. When asked the other day if he had always been well, the governor said:

"No, when I was a young man I had to leave college because of ill health, and my disease was thought to be incurable."

"Well, governor," said the interlocutor, "you must have had valuable experience in getting and keeping well. What would you advise to insure longevity?"

"To get an incurable ailment in your youth," responded the old gentleman, smiling, "and nurse it until your death."

A Cincinnati man died of what the doctors called "ox-heart." What kind of a new affliction is this?

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No. 6

EDITORIALS.

AUTOCHTHONOUS TUBERCULOSIS.

The discussion of this subject has extended to the local daily press. Under the title, "Some Consumption Theories," the following appeared as the leading editorial in a recent issue of the Rocky Mountain News:

The News long has been of the opinion that certain enthusiastic physicians have been overdoing the theory that consumption originates and develops in Colorado, and that deaths from cases so originated and developed are of weekly occurrence. It happens that two or three medical men who hold

this idea in a close embrace are connected with the departments which make statistics and formulate bulletins. During the past year or two the public has been troubled with numerous proclamations from their pens, including voluminous rules of living for those afflicted with the disease and for those who come in even occasional contact with them. The result is that the impression has gained ground that a case of consumption developed under normal circumstances in this State—not including what is called miner's consumption—is no longer a medical curiosity.

In a considerable experience the

News has not met with a single case of tuberculosis which originated anywhere in the elevated plateau of the Rocky Mountains, and it is prepared to say that testimony to similar experience will be given by many reputable physicians with large practice.

A letter on this subject has been received in reply to an inquiry from the News. It is from a physician who has had the widest opportunities and whose practice among tuberculosis patients probably is the largest in the State. Recognizing him as an authority, the News wrote to him, drawing his attention to official bulletins cataloging cases of consumption alleged to have originated in Colorado. Professional ethics prevent him from consenting to allow the use of his name, but the News can vouch for him as a man whose dictum is worthy of attention. He writes as follows:

"It gives me chronic disgust to see evidences of germs on the brain in a certain class of doctors. I have never had come under my observation a case of pulmonary consumption that I could say developed in this climate. Cases are reported, however, by men of unquestioned ability and veracity, but it seems odd in view of the fact that I have (without boasting) had probably as large and extended experience as any in the profession, and have never encountered a case. Those advocating, and, incidentally, alarming Colorado communities with germ theories and dangers of infection, do not consider the difference between this climate and that of the germ-laden atmospheres of the lower elevations. They do not consider the antiseptic

and electrical quality of this air, nor will they recall that game, etc., is preserved by the air alone, and that there is no decomposition; also that blood diseases, such as scrofula, syphilis, etc., together with chronic suppurating glands, etc., are benefited and cured in this atmosphere, frequently without the use of medicine. This talk of microbes from the plastering and walls of your room, and from dried sputa in the dust we breathe, contaminating, poisoning and producing and developing consumption, is, in my judgment, the veriest rot and nonsense. We have the finest aseptic climate in the world.

"Instead of striving to drive invalids from us we should remember that to this class of individuals more than to any other Colorado owes her prosperity and development. They should be encouraged to come instead of obstacles such as mentioned, with no basis of strength, being placed in their path."

This subject is of so great importance that the News suggests to the medical societies the desirability of taking it up and of presenting to the public well-considered statements which will dispose of the ill-digested theories that are being given a vogue to which they can lay no claim on a basis of facts. We have no doubt that under exceptional circumstances, coupled with habits that probably soon would kill the person, a case of tubercular consumption may originate in Colorado, but such a case is abnormal. It would be interesting to know if there is on record one authentic case of a healthy person contracting consumption in Colorado Springs. That city long

has been a special resort for consumptives, and if the germ theories of the alarmist school had foundation its mortality roll would abound in deaths from consumption contracted within its limits.

This reminds one strongly of the old story of the old physician who had never had a case of lacerated perineum in his obstetrical practice, or of the lawyer who, when informed by his client that the prosecution would present witnesses to testify that they had seen him steal the hog, for which act he was under indictment, replied, "Oh, that is nothing; we will bring twenty witnesses who will swear that they did not see you steal the hog." It also raises the question of the competency of the judge and the credibility of the witnesses.

We might suggest that the News in attempting to pose as judge on this subject is assuming a position it is not competent to fill. We know that lawyers, newspaper men, preachers and members of women's clubs do not hesitate to settle upon very slight data and very slight consideration questions which have formed perhaps the life work of many special investigators. We are not unjustified in inquiring whether the author of the above editorial has been in any way qualified by his professional training or by special work during any considerable period of time to justify him in his opinion therein expressed, or in the prominence given to it.

Again, we might be justified in suggesting that the News is not necessarily qualified to discriminate properly as to the weight to be given to the evidence of

the witnesses in the case. Legal evidence and scientific evidence are not always the same, and, with all due deference to the legal profession, it must be asserted that scientific men are the ones to discriminate as to the credibility of their fellows, and the weight to be given their statements. The personal equation is a factor of some considerable importance in such matters. The News has seen fit to present its testimony anonymously but, nevertheless, it bears internal evidence characterizing it very clearly to those who are practically familiar with the work of scientific medical investigation.

To revert to the character of the testimony itself, it must be borne in mind that non-observance is simply of negative value. One positive observation by a man of integrity and careful discrimination is of more value in the determination of such subjects than a thousand failures to observe. It is in the individuality of the observer that the personal characteristics are of so great importance.

The subject of autochthonous tuberculosis is of great importance. It has been recognized to be so by the profession and has been made the subject of investigation by more than one. First, we must note that there is a difference to be made between the two questions: "Does tuberculosis develop in Colorado?" and "Does tuberculosis originate in Colorado?" With the knowledge that tubercular foci may be formed early in life in the lymphatic glands or elsewhere without giving rise to any indications of disease at the time, and

may lie dormant for years until finally some depressing influence may so affect the organism that the affection makes its presence known; with this knowledge it cannot be absolutely stated that tuberculosis originates in Colorado except when such cases are found in individuals who have never been outside the State. On the other hand, if a person comes to this country in good health without having had previous indications of any pulmonary disorder in himself, and after a number of years of continued good health, consumption makes its appearance we are not justified in any other conclusion than that his tuberculosis has developed, and not impossibly originated here. If there be any considerable number of such cases and their type is of a greater severity than that of the general run of cases of the same disease which have developed elsewhere; i. e., if they show that a greater lack of power of resistance than usual has preceded the manifestation of the evidences of the disease, the probability that they have originated here is increased.

Such is the case, the News' correspondent to the contrary notwithstanding. Positive observations to that effect are no longer medical curiosities. Some two or three years ago a member of the Denver and Arapahoe Medical Society (since then a president of the Colorado State Medical Society) read a paper giving his observation of a number of such cases. I have, during about three years, observed about a dozen such, all but one of which are now dead. Within a year 99 cases of deaths due to

tuberculosis developed in Colorado have been reported to the Health Commissioner of Denver. It would be absurd to claim that they were the reports of two or three physicians, who are germ-mad. In all probability the clinical diagnosis of over 90 per cent. of these cases required no bacteriological confirmation, but was so typically clear that the veriest tyro in medicine could not fail to recognize the character of the disease. Will the correspondent of the News impeach the carefulness of the clinical work, the professional ability or the honesty of the physicians making such reports?

There is a practical unanimity of opinion on the part of the physicians observing such cases that, when tuberculosis is developed here, it is of unusually severe type; the patient almost invariably dies in a shorter time than the average. It appears that they all occur in individuals of unusually feeble powers of resistance, such as would in lower altitudes with moister climates become the subjects of galloping consumption and that those who in such localities would become the victims of the slower types of the disease do not develop tuberculosis here.

Even if the reply to the query as to the contraction of consumption in Colorado Springs should be negative it would be susceptible to two constructions beside the one inferred in the editorial above quoted. It is not in the absolutely healthy (and the inquirer would be sure to demand his pound of flesh in that respect) that tuberculosis develops in any climate but in those

whose power of resistance has been diminished by diverse influences. Then, through mistaken views as regards policy, such cases might not have been recorded. For that reason the article read before the Denver and Arapahoe Medical Society was not published by its author.

The observations made as to the development of tuberculosis in Colorado are no new thing nor do they detract from the value of Colorado as a resort for those afflicted with the disease. It is simply a repetition of the history of every noted resort for pulmonary disorders in the world. As the influx of consumptives has increased the opportunities for infection have been correspondingly increased. With the growth in the numbers of the population, especially of the poorer classes, has kept pace the crowding together of the people, likewise especially of the poorer classes, and a great augmentation of physical degeneracy has been the result. These degenerates have such feeble powers of resistance that they would succumb to rapid tuberculosis in any locality whatever in which the opportunity for infection with the bacillus tuberculosis is offered. It is no wonder that they contract the disease here or elsewhere. On the other hand, very many individuals with a lesser degree of vital enfeeblement who would become victims elsewhere, would remain immune here, or, if they have been so unfortunate as to contract the disease elsewhere may recover entirely or prolong their lives by emigrating from their former homes to the Rocky Mountain

regions. Such is the unmistakable conclusion to be drawn from the experience of those having the greatest familiarity with practice among pulmonary invalids.

THE PUBLIC MILK SUPPLY OF DENVER.

Since December, 1899, the question of impure milk has been freely discussed by the medical fraternity. Dr. George E. Tyler, Secretary of the State Health Board, urged Governor Thomas and the members of the State Board to insist on a rigid inspection of dairy cattle and dairy products, but until the recent meeting of the board very little has been done in this field owing to the lack of appropriation and latent opposition of the dairymen.

This period of silence, like the proverbial calm before a storm, has ushered in an energetic campaign against unsanitary dairies and tubercular cattle. It is unfortunate that dairymen must first request the testing of cattle, as the State is without legal power to compel other than the usual conformity to the required standard of cleanliness.

The key to this solution of the difficulty is found in the commercial value of a State certificate, which proclaims that the holder has complied with all requirements. This certificate will be used as a legitimate medium for advertising.

The Health Commissioner of Denver, Dr. T. J. Carlin, in his desire to advance this sanitary inspection, goes a step further by granting the privilege of posting a placard on the side of

the distributing milk cart so that it may be the means of continued advertising to the public. It is sincerely hoped that this vis a tergo will procure the earnest co-operation of the dairymen with Drs. Tyler and Carlin.

A side glance at certain figures as an inducement to physicians to aid in this work may not be out of place. Deducting from the quoted amount of bovine excrement, said to be consumed in milk in New York, Chicago and cities of relative size, the residents of Denver are compelled to accept, unknown to themselves, in the aggregate about two tons daily in the 100,000 gallons of milk which enters the city every morning. Apart from this loathsome ingredient, the milk contains a vast amount of concealed infection.

Every doctor is requested to require his milkman to produce the State and city certificates, which will guarantee that the holder has enjoyed a rigid inspection of his dairy premises, and that all cattle are free from tubercular disease.

A GOOD MOVE.

The health department of Denver is continuing its prosecution of the dairymen who use freezine or other chemicals for the preservation of milk. As mentioned in last month's Journal, a warrant had been issued against Arndt and Elliot of the Favorite Creamery, and trial set for May 22. They were convicted and fined \$25 and costs, but have appealed. J. Wagner of the North Boulevard dairy was let off on the payment of costs, as he claimed

that his milk had been mixed with some obtained from the Oriental dairy. Nels Holm had been fined \$10 and costs, but the fine was suspended, he having claimed that he had obtained the doctored milk from Pat McCabe, a Jefferson County ranchman. The latter, however, having convinced the judge that he had noticed a peculiar odor in Holm's milk cans at the time, the fine was ordered executed.

Freezine having been found in the milk of John Holm of the Cherry Farm Dairy, a warrant was issued against him. He, however, did not wait for service, but appeared in court, pleaded guilty and was fined \$10 and costs.

It is stated that the health department intends to publish in its monthly report a list of the milkmen convicted of selling adulterated or poor milk. This is a step which will meet with the approval of the entire medical profession.

THE LONG STEP.

King Arthur was moved to tears. "Sir Galahad," he sobbed, "is dead."

"Say not so," exclaimed the court jester. "Say, rather, he is enjoying a good knight's rest."—Philadelphia Press.

Some men who go to a doctor for a simple remedy for a cold or a touch of biliousness will forever thereafter refer to him as "my physician." There are also physicians who, having once been asked for advice in such a case, ever after claim to be that person's "family physician."

The Denver Clinical Society.

This report appears in no other medical journal.

The Denver Clinical Society held a social evening May 31 at the offices of Drs. Mitchell and Kindig, to which were invited their friends among the women physicians and dentists of the city. About twenty were present, and an enjoyable informal evening was spent according to the following programme: First, selections, readings, verses, etc.; second, medico-humorous anecdotes, preferably from personal experience; third, refreshments;

fourth, toasts. Everyone contributed her share to the general entertainment. Even the guests, who had not been apprised of the expected nature of the affair (for fear of scaring them away) came to the front nobly. Dr. Bates was toastmaster, and distributed some half-dozen toasts to the discomfiture of the following, who ably responded: Drs. Rothwell, Gale, Kapp, Bedortha, Love, Connelly and Mitchell.

Denver and Arapahoe Medical Society Meetings.

This report appears in no other medical journal.

A regular meeting of the Denver and Arapahoe Medical Society was held at the Brown Palace Hotel the evening of Tuesday, May 22nd, 1900.

Present, forty-four members, President Fleming in the chair. The minutes of the last meeting were read and approved.

The name of Dr. J. A. Murray, a graduate of the University of Pennsylvania, was proposed for membership by Drs. Stevens and Fleming.

The regular scientific programme was then carried out.

Dr. Leonard Freeman gave an address on "The Malignant Tumors of the Breast." He was followed by Dr. Wm. N. Beggs, with an address on "The Pathology of Infection."

Dr. Geo. E. Tyler read the paper of the evening, entitled "Gastro-Enterostomy for Dilation of Stomach," with report of a case. The paper was discussed by Dr. Leonard Freeman, and discussion closed by Dr. Tyler.

Dr. E. J. A. Rogers exhibited a patient, the victim of a mining accident, resulting in very extensive injuries to the face and chest, also a colles fracture of the right radius, a compound fracture of the left leg, with crushing of the foot and ankle joint. The recovery was very rapid and complete, the patient showing little traces of this serious experience.

The Secretary read a letter from Col. A. A. Woodhull acknowledging his notice of election to honorary membership.

It was moved by Dr. W. P. Munn that the Secretary be authorized to buy one hundred copies of the Code of Ethics, to be distributed to the members. Carried.

There being no further business, on motion the society adjourned until the second Tuesday in October.

C. P. CONROY, Secretary.

The Denver Clinical and Pathological Society.

This report appears in no other medical journal.

The Denver Clinical and Pathological Society met the evening of May 11, 1900, at the McPhee building, as the guests of Drs. Stevens, Blaine, Craig and Stover. Twenty-five members and one guest were present. Minutes read and approved.

The Membership Committee reported no vacancies.

The amendment introduced at the April meeting was placed on its passage, being discussed by Drs. Hershey, Whitney, Blaine, Bergtold, Beggs, Wetherill, Black, Van Zant and Jayne. It was adopted by a vote of 13 to 4.

No patients, specimens or instruments were shown.

Dr. Black made further report on his case of papillo-sarcoma of the throat. Discussed by Dr. Beggs.

Dr. Bergtold reported the successful use of urotropin and piperazin combined for pyelitis.

Dr. R. B. Freeman reported four successive cases where the child was born "in the caul." Discussed by Drs. Stover and Hall.

Dr. Stover reported a case of extensive severe lymphangitis of the lower extremity, with recovery.

Dr. Lobingier reported a case of marked tachycardia lasting eighteen hours, following nightmare, two months after operation. Discussed by Dr. Hill.

Dr. Waxham reported (1) a case of a typical intestinal obstruction, (2) a

case of appendicitis, with recovery under ice-pack and salines; (3) a case of appendicitis, with relapse. Discussed by Drs. Tyler, Hershey, Beggs and Lobingier.

Dr. Whitney reported a case of enormous abscess of the liver without change of contour of upper border, and without chills or fever.

Dr. Hill reported two cases of abscess of the liver following appendicitis, with operation, the liver abscesses rupturing into the lung. Discussed by Dr. Lobingier.

Dr. Beggs reported autopsy showing fractured skull, with extensive purulent meningitis, the diagnosis ante-mortem having been cerebral embolism.

Adjourned.

The Denver Clinical and Pathological Society met the evening of June 8, 1900, at the Tabor Opera House Block, as the guests of Drs. R. B. Freeman, Bonney, Bourquin and Whitney. Twenty-three members and one visitor were present.

Minutes read and approved.

The Membership Committee reported the following changes: Resigned, Dr. J. W. Higgins; dropped for non-attendance, Drs. S. G. Bonney and R. F. Le Mond; elected to membership, Drs. H. E. Warren, A. S. Taussig and S. B. Childs. The Secretary was directed by the society to express regret to Dr. Higgins upon his resignation.

No patients, specimens or instruments were shown.

Dr. Lyman reported a case of pyelitis due to calculus, disappearing under the combined use of urotropin and piperazin. Discussed by Drs. Hill and L. Freeman.

Dr. Blaine made further report of the successful use of galvanism in gleet. He also reported a case of lupus-erythematosus with amenorrhea for seven years. Discussed by Drs. Black and Gallaher.

Dr. Bourquin reported a case of pregnancy in a woman with membranous dysmenorrhea and uterine polypi. Discussed by Dr. Stover.

Dr. Waxham reported a case of empyema in extremis, with recovery. Discussed by Drs. L. Freeman, Hall, Van Zant and Waxham.

Dr. Kleiner reported a case of measles, followed by catarrhal enteritis, this being followed by appendicitis.

Dr. Stover reported experience with ovarian extract at the menopause. Discussed by Dr. Tyler.

Dr. R. B. Freeman reported a case of confinement with an umbilical cord fifty-three inches long wound eight times around the child's neck.

Dr. L. Freeman reported a case of fibro-adenoma of the female breast, which had been treated with paste by an advertiser, the result being extensive sloughing. He also reported having

seen a case of sloughing of the scrotum following carbolic acid injections for hydrocele. Discussed by Dr. Lobinger.

Dr. Black reported the successful use of gauze packings in middle ear suppurations. Discussed by Dr. Levy.

Dr. Gallaher reported two cases of gummata, one of the soft palate, the other of the tonsil. Discussed by Drs. Levy and Gallaher.

Dr. Hill reported a case of hyperplasia of the navel.

Dr. Pershing reported a case of oedema due to hysteria. Discussed by Drs. Hill and Pershing.

Dr. Tyler made further report on the case of exophthalmic goitre. He also reported a case of fatal gangrenous abscess of the lung, operation being resorted to. Discussed by Drs. Lobinger, Waxham, Black, Hall, Hopkins and Tyler.

Dr. Wetherill reported an extensive pelvic abscess with a sinus into the intestine, inspiration pneumonia developing after operation. Discussed by Drs. Pershing, Hall, Van Zandt and Lobinger.

Dr. Coover reported the removal of the upper cervical sympathetic ganglion for simple glaucoma. Discussed by Drs. Black and Pershing.

An informal discussion as to article 4, section 5, of the by-laws occurred, after which the society adjourned.

G. E. TYLER, Secretary.

Bulletin of the Colorado Medical Library Association.

Devoted to the interests of Medical Libraries in the West.

HENRY SEWALL, M. D., President.

LAURA LIEBHARDT, M. D., Treasurer.

CARROLL EDSON, M. D., Secretary.

CHAS. R. DUDLEY, Librarian.

No. 20. JUNE, 1900.

Much has been done in the Medical Department since the last report was made. The following new books have been catalogued and placed on the shelves: Ewart's Gout and Goutiness, Savill's Neurasthenia, Nothnagel's Specielle Pathologie und Therapie, volume 14, part 1; Gillespie's Manual of Gastric Methods, Knopf's Prophylaxis and Treatment of Pulmonary Tuberculosis, Campbell's Respiratory Exercises, Allbutt's System of Medicine, volume 8; Hare's Affections of the Mediastinum, Luff's Gout, Stedman's Twentieth Century Practice, volume 18; Eccles' Practice of Massage, and Gould's Year Books of Medicine and Surgery for 1899 and 1900.

Dr. Wm. Sturgis Bigelow of Boston has sent as a gift to the association the "Memoir of Henry Jacob Bigelow" and three volumes of his works, including Anæsthesia, Dislocations and Fractures of the Hip, and Orthopedic Surgery.

The association has also received as a gift the "Festschrift" in honor of Abraham Jacobi, M. D., LL. D., New

York. Its being the first volume of the kind published in this country makes it a unique as well as valuable addition to the library.

Mrs. Axtell has presented to the association the greater part of the library ing up the association by a few words of the late Dr. E. R. Axtell. There are about 160 volumes in the collection, and they will be put on the shelves in a few weeks.

We all know that a word of praise once in a while never comes amiss, so I take this golden opportunity of cheer of praise and appreciation given by a visiting physician here from Philadelphia.

He said that the medical profession should be proud indeed of their medical library; that nowhere had he seen greater facilities offered for using the books and magazines, and especially he mentioned the opportunities for using the private medical libraries in the city.

If we only had more room how happy we should be.

ZOE GUERNSEY.

THAT CIRCULATING THEORY.

First Red Corpuscle—Thank heaven, it's dinner time, and he's stopped thinking. I'm sick of the attic.

Second Red Corpuscle—Hurrah! I'll beat you down to the dining room!—New York Press.

NEWS ITEMS.

REGULATIONS OF THE COLORADO STATE BOARD OF HEALTH FOR USING TUBERCULIN FOR THE DIAGNOSIS OF TUBERCULOSIS IN CATTLE.

First—Begin to take the rectal temperature at 6 a. m., and take it every two hours thereafter until 10 p. m.

Second—Make the injection at 10 p. m.

Third—Take the temperature next morning at 6 o'clock, and every two hours thereafter until 10 p. m.

Each adult animal should receive two cc. of the undiluted tuberculin as it is sent from the laboratory. Yearlings and two-year-olds should receive one to one and one-half cc., according to size. Bulls and very large animals may receive three cc. The injection is made beneath the skin of the neck or shoulders.

A rise in the temperature on the day following the injection of two or more degrees Fahrenheit above the maximum observed on the previous day is regarded as an indication of tuberculosis.

The owner of the herd is to pay the actual cost of a sanitary inspection of his dairy and the testing of his herd. The cost of said testing until further notice is one dollar per head up to one hundred cows, and fifty cents per head for each cow above one hundred. This money is to be paid to Dr. J. N. Hall, Jackson Building, Denver, Treasurer of the State Board of Health.

The owner is further to kill every condemned cow under the supervision of the State Board of Health.

Or he may, at his option, completely separate said diseased animals from the rest of the herd, if he will give bond to keep them separated, and not to dispose of them or sell milk from them, except by consent of the State Board of Health.

He further agrees to correct all unsanitary conditions found at his dairy, and not to add animals to his herd during the time for which he is given a certificate, unless said animals have been previously tested by some one specifically recognized by the State Board of Health.

In cases of the testing above mentioned the State Board of Health agrees to examine the sanitary condition of the dairy and make report thereon to the owner thereof.

To test the animals of the herd for tuberculosis in accordance with the regulations above described.

To mark the animals which are found free from tuberculosis.

To mark with an imperishable brand the condemned animals, unless said animals are at once killed under the supervision of the State Board of Health.

When its regulations are complied with to give a certificate good for one year, signed by the President and the Secretary of the State Board of Health, under seal of said board, said certificate to be used by the owner of the herd for advertising purposes.

The dairy inspector appointed by the State Board of Health is to make complete written report of the sanitary condition of the dairy, and also to keep accurate record of the work of testing the herd on the blanks provided for said purpose. These reports are to be filed with the Secretary of the State Board of Health within one week from the date of completion of the testing.

By order of the State Board of Health.

G. E. TYLER, Secretary.

Denver, Colo., May 24, 1900.

THE STATE INSTITUTIONS.

With the exception of the penitentiary, the Colorado State institutions have had an increase in the number of inmates the past month. During May the State Home for Dependent Children admitted three boys and three girls. The total number of inmates is now eighty-three. One girl was admitted to the State Industrial School for Girls. At the State Industrial School for Boys, seven boys were admitted, five were paroled and two discharged.

Seventeen persons were admitted to the State Reformatory at Buena Vista. One paroled prisoner was returned, and eleven were discharged. There are now 107 inmates, which taxes the institution to its utmost capacity.

The State Insane Asylum admitted five men and one woman. There were three escapes, four deaths and two paroles.

Twenty-two men and one woman were received into the penitentiary.

Two paroled prisoners were returned, seven were discharged on expiration of term, eight, by paroles, and there was one death.

There are now in the penitentiary 530 men and three women.

NEW DENTISTS.

The Colorado State Board of Dental Examiners have granted certificates to the following applicants: W. H. Mathews, C. C. Langley, G. H. Hinds, Carrie E. Loy, W. E. Sanderson, A. E. Goodwin, A. E. Schlabach, H. A. Elmquist, W. C. Lyons, C. D. Leshner, R. M. Culver, D. Hopkins, C. A. Bennett, A. A. Wallace, L. A. Walker, T. J. Bovard, D. C. Mathews.

Twenty-one persons took the examination.

MEDICAL SCHOOL ALUMNI.

The alumni of the Medical School of the University of Colorado held its annual meeting at 501 McPhee building Friday evening. Dr. Depeyn was elected President, Dr. Alice Guthrie Vice President, and Dr. Sarah Hosford Secretary-Treasurer.

ST. LUKE'S HOSPITAL.

At this hospital 893 patients were treated during the past year, and \$6,642 expended for the maintenance of free patients.

The newspapers report that Angus McKinnon of Stockton, Cal., was cured of cancer of the face by the use of the x-ray. Nothing is said as to who made the diagnosis or its correctness.

THE MEDICAL AND SURGICAL REGISTER.

R. L. Polk & Co., Detroit, Mich., publishers of Polk's Medical and Surgical Register of the United States and Canada, request that all practicing physicians notify them of removals, newcomers, deaths, physicians retiring from practice, new medical societies, hospitals, asylums, sanitariums and mineral springs in their vicinity. This information will materially aid in revising the Medical and Surgical Register.

LEPROSY.

It was announced by one of the local newspapers that the Health Department had discovered that a Chinese laundryman, lounging around Chinatown, is a leper, and that they would arrest him the next day. They failed to catch their hare, however, and it is not known whether their trepidation had any real foundation in fact.

The New Mexico Medical Society has just finished its annual meeting at Santa Fe. Alamogordo will be the meeting place next year. The following are the new officers: President, Dr. J. H. Sloan, Santa Fe; First Vice-President, Dr. G. W. Hope, Albuquerque; Second Vice President, Dr. J. A. Rolls, Watrous; Secretary, Dr. J. Frank McConnell, Las Cruces; Treasurer, Dr. G. W. Harrison, Albuquerque; Executive Committee, Drs. George C. Bryan, Chairman, Alama-

gordo; Dr. W. R. Tipton, Las Vegas, and Dr. S. D. Swope, Deming.

The famine districts of India have had another horror added to that already existing. Cholera has attacked forty-five of the camps and thousands have died from it.

The Arapahoe County Commissioners have let the contract for building a new insane ward for the County Hospital. According to the bid accepted it is to cost \$43,400.

Dr. M. M. George has been appointed examining surgeon for the government recruiting office in the Cheesman Block. Dr. George came to Denver from Pittsburg a year ago. In the last-named city he for several years published the West Pennsylvania Clinic in Pittsburg. He was also for a time associate editor of this journal, and of great assistance to Dr. Axtell in that capacity.

SIZING HIM UP.

Miss Maison—Excuse my ignorance, but ought I to call you Mr. Bones or Dr. Bones?

The Doctor (irascibly)—Oh, call me anything you like. Some of my friends call me an old idiot!

Miss Maison—Ah! but those are only people who know you intimately.—Exchange.

A New York man drank twenty-five glasses of soda water on a wager, and recovered with the aid of a fizzician.

BOOK REVIEWS.

GOULD & PYLE. A Cyclopedia of Practical Medicine and Surgery. A concise reference book, alphabetically arranged, of Medicine, Surgery, Obstetrics, Materia Medica, Therapeutics, and the various specialties, with particular reference to Diagnosis and Treatment. Compiled under the editorial supervision of George M. Gould, A. M., M. D., editor of "The Philadelphia Medical Journal," etc., and Walter L. Pyle, A. M., M. D., assistant surgeon to Wills Eye Hospital. 73 Contributors, Quarto, Illustrated. Sheep or half dark green leather, \$10.00; thumb index, \$11.00. Half Russia, thumb index, \$12.00. P. Blakiston's Son & Co., Philadelphia, 1900.

As a visitor to the office expressed it, "this is a winner; it will be a great seller." In size and arrangement it is a companion to Gould's Illustrated Dictionary of Medicine. In reasonable compass, it presents in cyclopædia form a vast amount of information. A mere glance through the work is sufficient to demonstrate its usefulness and that the opportunities for its consultation by the practitioner will be many. It is obviously impossible to make selections for special review in a work of the scope of this one. In a general way it may be said that the subjects are treated briefly, without any redundancy of words, but not so briefly as to lose in definiteness and clearness. The book being a practical one, Diagnosis and Treatment

have received particular attention. Many valuable formulæ have been included and a large amount of information presented in tabular form. Numerous cross-references increase its usefulness.

TEXT BOOK OF PHYSIOLOGY.

By Winfield S. Hall, Ph.D. (Leipzig), M. D. (Leipzig). Professor of Physiology, Northwestern University Medical School, Chicago; Member of the American Physiological Society; Fellow of the American Academy of Medicine. 650 pages, 343 engravings and six colored plates. Philadelphia. Lea Brothers & Co. 1899.

This book is the latest of the several works on physiology which have been issued by American authors within the last few years. In its scope and clearness of style it will easily take rank with the best of these works. A strong feature is the preliminary statement at the head of each subject, of its anatomy, chemistry and physics. These features, as the author justly remarks, being the three foundations on which physiology is built. In this work physiological physics is given a large place, quite in contrast with its meager mention in most of our recent text-books. This is especially noticeable in the section on respiration. Two features will be found especially helpful by both student and general practitioner, namely,

the syllabus of contents at the head of each chapter and the references to literature in the midst of the text. The entire book is so well written that it is difficult to say which sections are the strongest. The chapters on digestion are among the very best, thoroughly modern and complete. An unusually full and clear consideration is given of the internal secretions, containing the most recent researches along this line. The entire section on the nervous system, with its comprehensive introduction, is one which, for clearness and condensation, leaves nothing to be desired. In this respect it contrasts with many of its elaborate and yet ambiguous contemporaries. The make-up of the book is good, both as to paper and type, and the illustrations and plates are satisfactory and to some degree new. Altogether, the book is one which may be heartily commended to students and practitioners alike, and one of which the American profession may well be proud. C. B. V.

THE ANATOMY OF THE BRAIN.

A Text-book for Medical Students. By Richard H. Whitehead, M. D. Professor of Anatomy in the University of North Carolina. Illustrated with Forty-one Engravings. 6½x9½ inches. Pages, v-96. Extra Vellum Cloth, \$1.00, net. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia, Pa.

This is a short monograph on the subject indicated by its title. It is to be specially commended for the clearness

with which this, usually so difficult, subject is handled. The distinctly illustrative character of the engravings is of great assistance in this respect. Not only the medical student, but also the graduate, can be justly advised to use this work in forming and keeping up his acquaintance with cerebral anatomy.

The publishers have been careful to see that the mechanical excellencies of the book correspond with the good qualities of its text.

INJURIES TO THE EYE IN THEIR MEDICO-LEGAL ASPECT. By S. Baudry, M. D. Professor in the Faculty of Medicine, University of Lille, France, etc. Translated from the original by Alfred James Ostheimer, Jr., M. D., of Philadelphia, Pa. Revised and edited by Charles A. Oliver, A. M., M. D. Attending Surgeon to the Wills Eye Hospital; Ophthalmic Surgeon to the Philadelphia Hospital; Member of the American and French Ophthalmological Societies, etc. With an adaptation of the Medico-Legal Chapter to the Courts of the United States of America, by Charles Sinkler, Esq., member of the Philadelphia Bar. 5½x7½ inches. Pages, x-161. Extra cloth, \$1.00, net. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia, Pa.

This book should be of interest to the profession as a book of prognosis on ocular injuries, as well as improve the oculist as an expert witness. It does

not deal with the malpractice side of the question. It is intended to assist the oculist in forming an opinion as to the justness of a plaintiff's claim in action for damages against some individual or corporation. The author has collected a large number of his personal observations which are used to illustrate various points in the text. Part four is devoted to Medico-Legal expert testimony as translated, rewritten and adapted to the Courts of the United States, by Charles Sinkler, Esq., of the Philadelphia Bar. He divides his subjects into six parts, as follows: First, expert evidence in general; second, Medico-Legal experts; third, a few cases in which expert testimony relating to the eye has been offered; fourth, procedure in the examination of experts; fifth, expert testimony in cases of malpractice; sixth, proposed legislation on the subject.

MELVILLE BLACK, M. D.

AN AFFAIR OF HONOR.

"Vat ees eet, Jean?"

"Monsieur, ze doctaire comes to-day to vaccinate monsieur."

"Nevaire! I vill die first. Eet ees degrading! Eet ees an insult!"

"But monsieur, eet ees also ze law."

"Shameful! How can I suffaire a beast of a doctaire, wi hees brutal weapon, to stab me—me, ze Count de Mooscalonge? Nevaire!"

"But eet ees ze law, monsieur."

"Perfidious law! Ah, I have eet! I

have eet now! Beautiful! Listen. You will prepaire ze swords."

"Ze swords, monsieur?"

"Prepare ze swords. On ze point of one sword monsieur ze doctaire will rub his vaccinate mattaire. See? Zen he will diffaire from me on ze Dr-r-yfus question. I will feel insulted. I will challenge ze doctaire. He will accept, naming swords as ze weapons. We will fight at once, and here ze doctaire takes ze prepared sword. See? One-two-three! Ze doctaire pricks me slightly in ze arm. Ha, ha! Honor is satisfied! I am vaccinate!"

THE DOCTOR'S GUESS.

Lawyer Chapman of Los Angeles was once associated with Senator Stephen M. White in a certain case. Chapman loves a good dinner, and one day, just before the big case was to come up in court, he ate more than he ought. The next day he was sick, and White took a doctor around to see him. Chapman was groaning with pain, and the doctor was puzzled. At last the doctor noticed a red spot on Chapman's cheekbone, and came to the conclusion that Chapman needed a dentist, and told him so:

"You have an ulcerated tooth. That's what ails you."

Chapman quit groaning long enough to turn to his wife and say:

"Just hand me my plates off the bureau so I can see which one of those miserable teeth is aching."—New England Magazine.

THE COLORADO MEDICAL JOURNAL

AND WESTERN MEDICAL AND SURGICAL GAZETTE.

A Scientific Medical Journal, Published in the Interest of the Profession of Colorado and Adjoining States. A Journal of Science, of News and of Medical Lore.

VOL. VI.

DENVER, COLORADO, JULY, 1900.

No. 7.

ORIGINAL COMMUNICATIONS.

Symposium on Syphilis.*

Modes of Infection.

BY E. P. HERSHEY, M. D. DENVER, COLO.

Were I, Mr. President, Ladies and Gentlemen, to make a single statement as regards the subject assigned me in this symposium, i. e., "The Modes of Infection," I would state that there is but one mode—that by absorption through contact. In briefly stating some of the modes of infection, we would do well to be cautious as to our statistics, especially those gleaned from our patients. Were we to believe all they tell us we would soon be convinced that the very air we breathe is impregnated with the virus, and that one of the most common modes of infection is through this channel.

It is astonishing that this loathsome disease does not spread more among the innocent than it does, through the carelessness displayed by those who are afflicted. It seems as though there must be a guardian angel constantly hovering over the innocent and unwary. The careless barber with his unsterilized razor; the dentist who

works from mouth to mouth; and, we must admit, the careless, slovenly physician whose errors should be considered only as a crime, are channels through which this virus has entered the tissues of the innocent.

Those soft-brained women with a desire to kiss every tot they meet are often responsible for graver results than the night terrors they give the little ones. Nurses, more innocent of the results than the cause of the mucous patches in their mouths, have often been responsible for inoculating children with the disease. Down in Louisiana a case of this kind occurred in which a child, having cut his forehead, the nurse kissed it, a chancre appeared some two weeks later, and the mother, too, was inoculated by nursing the child, the chancre coming in contact with the upper part of the breast. Servants using the syringes of their employers have been responsible for the inoculation of the innocent. Holding money between

*Given at the Colorado State Medical Society, June 20, 1900.

the lips has been reported as a cause of the inoculation of this disease. Wearing a tight fitting hat belonging to another, the sweat-band of which presses a deep furrow into the skin of the forehead; using a cigar cutter; licking the same envelope that another has licked in order to better seal it; using a neighbor's lead pencil and holding the point between the lips, are a few authenticated ways of inoculating this disease. The lavatory is responsible for its spread. Using the same soap, same towel, drinking from the same cup that others drink, and sitting upon the same closet seat that every other tenant in the block uses. A striking mode of contagion is that reported by Dr. Gallaher, in which, a young man having gotten a cinder in his eye, the lid was turned down and the cinder licked out with the tongue by a woman who does not stand the highest in the esti-

mation of people. This patient was inoculated with the disease, the chancre appearing upon the lower lid some ten days afterwards.

These few unique illustrations of the modes through which this disease can enter the system are given more for the purpose of a warning as to the possibilities of the inoculation of the innocent than to attempt a history of all the modes that have been recorded.

A disease so closely guarded by the sufferer and one that permits him to mingle so closely with his fellow men has its dangers in its difficulty of detection. The constant interchange of personal apparel, and articles that are placed in the mouth, and a disease so rampant in all classes of society, are sufficient to make it a duty upon the part of every physician to warn his patients not to trust too implicitly in the purity of his neighbor.

Problems of Diagnosis of Initial Syphilitic Lesions.

By WILL. B. DAVIS, M. D., PUEBLO, COLO.

The problems of diagnosis in suspected initial lesions of syphilis consists mainly in differentiation, in order of frequency, from the simple venereal ulcer, herpes progenitalis, gumma, epithelioma, and papules or beginning ulcerations of lupus vulgaris.

As a rule, the gross appearances peculiar to each are either sufficiently absent as to all but one, or conspicuously present as to the one or the other to permit of a diagnosis either directly or by exclusion.

In *chancre* we usually find a single lesion; when multiple appearing simultaneously, seldom successively; with induration almost constantly present, first appearing as a papule or an eroded spot; not necessarily ulcerating, though usually a superficial ulceration is present; round or oval, with regular outlines; scantily secreting; but slightly sensitive; with an incubation history of from a fortnight to a month; often not venereal; not uncommonly extragenital; non-autoinoculable, and ac-

accompanied by polyadenitis, which is rarely suppurative.

In *chancroid*: Rarely solitary lesions; multiple ulcers often developing successively; non-indurated, but sometimes accompanied by inflammatory thickening; always in the form of an ulcer, with undermined edges; at first round, but later angular in outline with irregular borders; giving a copious, purulent and often sanious secretion; very sensitive; with an incubation history of from twenty-four hours to three or four days; almost always of venereal origin; almost always situated on the genitals or immediate vicinity; always autoinoculable, and accompanied by monadenitis, which is frequently suppurative and virulent.

In *herpes progenerialis*: No incubation history. Starts as vesicles, generally in clusters, which frequently become ruptured and irritated, and instead of vesicles we find an erosion or superficial ulceration, when the usually serous secretion is changed to a seropurulent discharge. Herpes progenerialis originates from uncleanness or irritating secretions. Adenitis is generally absent.

In *gumma* upon the genitals: The history of antecedent syphilis, absence of adenitis, and, as a final resort, its behavior under full doses of the iodides.

In *epithelioma*: The history as to duration, its sharp outlines, distinctly raised or so-called "rolled-up" borders, and pearl-like nodules here and there about its margins.

In *lupus vulgaris*: Its chronicity, its superficiality; its small, multiple points

of ulceration, tending to cicatrize here and there, and apple-jelly colored papules encroaching upon the healthy skin beyond.

The microscope reveals, in chancre: Blood vessel changes, hyperplasia of the fixed connective tissue elements, and condensation. In chancroid: Absence of vessel changes, absence of hyperplasia of the fixed connective tissue elements, with solution of tissue. In gumma: The same appearance of blood vessel changes and hyperplasia of fixed connective tissue elements as in chancre, plus gummatous degeneration. In epithelioma: The characteristic epithelial invasion; and in lupus vulgaris, caseation and the tubercle bacillus.

As between chancre and chancroid, differentiation is not always satisfactory even after careful consideration of established points of contrast, and I fear a degree of uncertainty will continue to linger until the bacillus—or whatever it is—of syphilis is discovered. It is, therefore, not best to give an absolutely positive diagnosis based entirely upon the initial lesion however nearly, in part or in whole, it may approach our idea of the true chancre; nor be too sanguine that we are only dealing with a venereal ulcer. For, in the first place, contributory conditions may cause the chancroid to simulate the chancre; and, upon the other hand, we should never forget the possibility of a mixed infection, or the inoculation of syphilis upon a chancroidal base.

The Bacteriology of Syphilis.

By W. C. MITCHELL, M. D., DENVER, COLO.

Four hundred years ago, Fernelius gave a description of syphilitic infection which has scarcely been improved upon up to the present time. Notwithstanding many arduous attempts, we are but little nearer to a solution of the true etiological agent of syphilis than when these sentences were penned in the gray dawn of science.

According to Fernelius,* (1485-1558), the syphilitic virus first infects one portion of the body and then spreads throughout the entire organism; (2) all the tissues and fluids are finally drenched with the syphilitic poison; (3) the tissues and the fluids are the vehicle of the contagion; (4) the infection occurs only by direct contact on a portion of the mucous membrane or skin denuded of its epithelium; (5) syphilis dating from birth has had its origin in the parents; (6) syphilis may remain latent in the system; and finally, (7) a person suffering with syphilis cannot receive a fresh infection.

That there is a syphilitic virus we now know as well as did Fernelius, when, nearly four centuries ago, he wrote his wonderfully accurate laws. As to the nature of this virus, a scrutiny of the work done in this direction will enable us to see whether recent investigation has definitely settled this matter.

In what may well be termed the pre-bacterial days, i. e., when investigators

had conceptions which were more or less vague as to the nature of those microscopic entities which were being associated with various diseases as their causative factors, several workers had put forth etiologic claims for microorganisms discovered by them. In 1837, Donne found an organism in the pus of buboes and in the tissues of chancers which he named *vibrio lineola*. In 1869, Hallier reported that he had discovered the etiological agent of syphilis in a micrococcus which was present in the blood of those suffering from syphilis. In 1872, Lostofer believed he had found the causative factor of this disease in what he termed syphiliskörperchen or syphilitic granules. These granules appeared in the blood of syphilitic victims, and was demonstrated by keeping their blood in a moist chamber for several days.

These and other unimportant discoveries which appeared from time to time have all since been proven to have had their errors in a faulty technique, which was unavoidable when one considers the early days of bacteriology. It was only commencing with the years of 1879 and 1880 when, under the masterful minds of Pasteur and Koch, bacteriology crystallized into a science with well-defined laws and technique, that workers were equipped with weapons which at least gave promise of an ultimate victory.

In 1879, Klebs reported that he had

*M. Kaposi, Aetiologie der Syphilis.

discovered what he presumed to be the etiological agent of syphilis in syphilitic tissue and fluids. An ape was inoculated with this micro-organism with what was thought to be positive results. In morphology this organism was peculiar and Klebs thought he had discovered a new species. This bacterium he christened with the name of "Helicomonaden." Strict investigation of Klebs' Helicomonaden showed that they could have no legitimate claim as the etiological agent of syphilis.

An organism put forth a few years later by Birch-Hirschfeld met with the same fate and has since been relegated to the past, having historical interest only.

In 1884, Lustgarten, working in Weigert's laboratory, put forth the claim that he had discovered "a specific bacillus for syphilis which was distinguished by its morphology, arrangement and tinctorial properties." According to Lustgarten, these bacilli were found in practically all syphilitic tissues and neoplasms. In morphology and staining properties this bacillus of syphilis strongly resembles the bacillus of tuberculosis and the bacillus of leprosy, with both of which diseases syphilis has some characteristics in common. Doutrelepon and Schutze discovered the same bacillus independently of Lustgarten, and numerous other investigators promptly confirmed Lustgarten's work. Hence, it was readily believed that the "veritable germ" had at length been discovered. All attempts to cultivate this bacillus artificially signally failed and thus the

second, third and fourth laws of Koch could not be carried out.

Considerable doubt was thrown on the value of Lustgarten's bacillus by the discovery of Alvarez and Travel in the following year of the micro-organism which we now know as the smegma bacillus. Matterstock also discovered the same bacillus independently and in the same year. According to these observers, a bacillus was constantly found in the smegma of the male and female genital organs which resembled in all details the bacillus of Lustgarten both as to morphology and staining properties. This bacillus is also frequently found in the moist parts adjacent to the genital organs. Baumgarten and many others are of the opinion that the bacilli which Lustgarten found in syphilitic lesions taken from or near the genital organs were the smegma bacillus, and that the bacteria found in places at remote parts from these organs were tubercle bacilli, and that in these cases there was a mixed infection of tuberculosis and syphilis. On the other hand, the eminent Viennese syphilographer, Kaposi, thinks it probable that the bacillus of Lustgarten is the veritable bacillus of syphilis, and as much of the material obtained for Lustgarten's work was taken from Kaposi's clinic, he has followed Lustgarten's work very closely.

In 1892 P. Doehle¹ reported that he had discovered a protozoon in the secretion from chancres and also in the blood of syphilitic patients. In later communications (1897) he reports to find them in secretions of syphilitic tissue

¹ Centralblatt für Bacteriologie. 1892.

and also reports successful animal inoculations.

The next most important work done with reference to the etiological agent of syphilis was by Van Niessen of Wiesbaden in 1898.¹ Van Niessen claims that if a proper examination of the blood of one afflicted with syphilis be made, one will without a single exception find certain minute rose-colored or reddish forms with green edges,—plasma granules or molecules. Whether these forms are identical with Löffler's granules which have been mentioned above, Van Niessen² is not able to say, but he contends that these granules in the blood are pathognomonic, and cannot understand why so many ardent students of the blood could have overlooked them unless they mistook them for contaminations. In the routine examination of his syphilitic patients he never fails to find them. These granules are in some way dependent upon or related to his specific micro-organism. To this micro-organism the name diplo-bacillus has been applied, and Van Niessen has succeeded in cultivating it from the blood of several syphilitic cases, the characteristic growth being long drawn out thready projections which call to mind the development of anthrax bacillus. Rabbits, according to this author, are susceptible to syphilis, as he has succeeded in calling forth in these animals both abortion and characteristic lesions by his inoculations.

In passing, it may be remarked that a study of the blood for Van Niessen's granules, and also by the application

of the Justus blood test for syphilis, in which the hemaglobin is rapidly reduced by a single inunction of mercury, promises to clear up many obscure and doubtful cases of this disease.

From this short resume of the most important research done with reference to the etiological agent of syphilis, it will be seen that the question is as far from solution as ever. One of the principal difficulties in the way seems to be the fact that animals are little if at all susceptible to the syphilitic virus, thus limiting in a very decided manner the experimentation on this subject.

In conclusion, it may be said that while a bacterial etiology is usually supposed to be true in syphilis, it is well to bear in mind that the true etiological factor may be found, after all, not to belong to the vegetable kingdom as represented by bacteria, but it may be found in the lower forms of the animal kingdom. Van Niessen admits the possibility of Doehle's protozoa playing an important side role in this disease. In this connection it may be mentioned that biologists¹ have a third division of these lowest forms of life which seems to be the connecting bond between the bacteria and the plasmodia, —mycetozoen, or as some German writers have it Pilzthiere² fungus-animal. It is by no means disproven that Van Niessen's interesting micro-organism does not belong to this class.

A novel and extremely important method of bacterial culture had its origin a few years ago in the Pasteur Institute when Nocard, acting on some prior work of Metchnikoff's, introduced

¹ Centralblatt für Bacteriologie, 1898.
² Centralblatt für Bacteriologie,

¹ Technische Mykologie, La Far, 1897.
² Lehrbuch der Zoologie, Hertwig, 1897.

the method of culture which is now known as the collodion-capsule method. Capsules are made of collodion about the size of a small test tube, sterilized, filled with suitable culture media, inoculated with the material to be investigated and then placed into the peritoneal cavity of a rabbit. The rabbit is thus made to play the part of a living incubator and bacteria are thus placed where endosmosis and exosmosis can

take place in the bodily juices of the animal, and the bacteria are protected from the leucocytes. Several important discoveries have been made by this method of culture, and it may be, should further investigation prove Lustgarten's or Van Neissen's claims to have been erroneous, that this novel method of culture may shed light on the obscure subject of syphilis.

Cutaneous Manifestations of Syphilis.

By J. M. BLAINE, M. D., DENVER, COLO.

From a diagnostic standpoint, the eruptive stage of syphilis is of much greater importance than either the primary or tertiary. True, the tertiary stage is more serious to the patient, but in almost all cases the diagnosis is made or confirmed by the cutaneous manifestations and if proper treatment is instituted and carried out the case will readily pass beyond this stage.

There is no pathologic lesion in the skin which may not be imitated by the eruptive stage of syphilis, hence it is that syphilis is sometimes mistaken for other dermatoses, and innocent eruptions are so frequently diagnosed syphilis.

The rule "when in doubt play trumps" may be good in whist, but the physician who carelessly or ignorantly diagnoses every skin eruption syphilis, as I have, alas, too often seen, casts a blight and suspicion on the fair name of many an innocent patient and ruins many happy homes. The physician who is too lazy to study derma-

tology sufficiently to be able to differentiate an ordinary simple skin eruption from syphilis, or who willfully makes the mistake for purposes of financial gain, should be driven in disgrace from the ranks of an honorable profession.

In carrying out the wishes of the executive committee, I shall endeavor, in the few minutes allotted to me in this symposium, to call your attention to some of the differential points between the various forms of syphilitic eruption and the dermatoses they simulate.

In studying the eruptive stage of syphilis, it must be remembered that its evolution is slow and classic. The length of time intervening between the initial lesion and the manifestations on the skin has much to do in determining the character of the eruption; thus the early secondaries are different from the late secondaries; and where the eruptive stage has been delayed by an insufficient course of treatment following the initial lesion, the eruption will be different and usually more severe.

Certain forms of eruption have a predilection for certain regions of the body. This is not only true of syphilis, but is also true of the various dermatoses for which syphilis might be mistaken.

I cannot attach much importance to the color of syphilitic eruption, which we are taught must be "coppery" or the color of "raw ham." The color depends largely upon the complexion of the patient. An Albino would show a pink lesion while a negro would present a black one, and the various shades of color between these extremes would represent almost all the colors of the rainbow. My own experience has been that had I depended upon the color of the lesion to predicate a diagnosis, I would have seen but few cases of syphilis. The color at first is due to dilatation of the capillary vessels, hence in the Caucasian is red or pink, and may be made to disappear by pressure. As the inflammatory process continues, cell infiltration takes place and later there is a deposit of pigment. This combination gives the typical "raw ham" or coppery color. As the inflammatory process subsides, the vessels assume their normal caliber and nothing is left save the pigment, which is bronze in color, hence the color depends also upon the age and condition of the lesion.

Polymorphism is a distinctive feature of syphilis. As the disease progresses in its classic evolution, one form of syphilis may follow another so closely as to overlap, so that in a typical case two, three, or even four varieties may be seen on the same subject. Polymorphism is pathognomonic of syphilis and is not found in any of the

other 137 dermatoses.

The form and distribution of skin eruptions in syphilis are also characteristic. The earlier eruptions, as a rule, cover most of the body, while their shape is round. Later eruptions, while they may still retain their symmetrical distribution, show a tendency to group in patches, while still later eruptions usually have the rounded lesion, but pay no heed to symmetry.

The crusts of syphilitic lesions are usually of a greenish tinge, and unless undermined by pus, are tightly adherent.

The ulcers of syphilis resemble a chancroidal ulcer, and in shape are round, oval, or reniform.

A syphilitic cicatrix is round, smooth, and, at first, colored by pigment. The pigment disappears at first from the center and later the entire cicatrix is white, surrounded by pigment.

For a disease which shows the amount of pathologic changes, syphilis is remarkable for the almost entire absence of subjective symptoms. The sensations of burning, stinging, itching, and pain, so common in most dermatoses, are in almost all cases of syphilis entirely absent.

According to the best authorities, the cutaneous manifestations, occurring during the secondary stage of syphilis, are divided into seven different varieties, viz.: I. Erythematous. II. Papular. III. Pustular. IV. Pigmentary. V. Vesicular. VI. Papulo-squamous. VII. Tubercular. Those found during the tertiary period are: I. Rupial. II. Ecthymatous. III. Gummatous.

The earliest skin eruption is the *erythematous* or macular, which usu-

ally makes its appearance from four to eight weeks after the appearance of the chancre and manifests itself first on the chest and abdomen and later on the extremities. The macules are rounded in shape and are due to capillary dilatation, and for this reason appear first on the parts of the body where the integument is thinnest. The exposed parts of the body, where the skin is thicker, may not be attacked at all by this variety, especially if proper treatment is instituted as soon as the diagnosis can be safely made.

Before cell infiltration or pigmentary deposit has taken place the color may be made to disappear by pressure. This variety of syphilitic eruption must be differentiated from measles and from the eruptions caused by the internal administration of certain drugs. In measles we have the catarrhal symptoms and rise of temperature and may also be aided by the history of contagion. In dermatitis medicamentosa there are no objective symptoms other than the rash, while the subjective symptom of itching is rarely absent and is usually very pronounced; besides, the history of having ingested certain drugs may also be obtained.

In erythematous syphilide, the subjective symptoms are wanting, but the enlargement of the post-cervical, epitrochlear and other glands will usually make the diagnosis easy. This eruption, being the earliest in the course of the disease and showing less pathologic changes, will naturally show less persistence and yield easiest to treatment. If left to itself it may disappear in a few days or weeks to relapse again or

be followed by other varieties, while under specific treatment it will fade very quickly.

The *papular* syphilide makes its appearance usually about two months after the chancre. It may be associated with the macular, or may come after the latter has disappeared. There are two varieties of the papular syphilide, the small miliary and the flat, the latter being the more common. The papules are round, flat on the apex, and as they develop they increase in circumference at the base. The top of these papules is frequently umbilicated and the epidermis shows a decided tendency to scale. They are scattered over more or less of the body, frequently invading the face and do not show any tendency to grouping. In color they at first show the pink of congested capillaries and later the admixture of pigment shows the characteristic "raw ham" color. On the palms the papules do not rise above the surface but appear more as macules which show a tendency to scale off and leave depressions. As a rule, these macules on the palm are discrete and do not show the tendency to coalesce; that is found in the later squamous syphilides. Where a dry papule occurs on the skin between two opposing surfaces it may become moist and increase in size, forming what is known as the mucous patch on the skin.

Papular syphilide may be mistaken for lichen planus, but this disease shows a tendency to grouping and is rarely found on the palms and soles. On the wrists and ankles it is found in small pointed papules and on the body in large, flat umbilicated lesions. The

lesions on the body are generally quadrilateral and often arranged so as to imitate Mosaic art work. Lichen planus always itches and does not show any glandular involvement, mucous patches, or hair falling.

The *pustular* syphilide appears in from six weeks to several months after the initial lesion and are found on all parts of the body. A syphilitic pustule is slow in developing and may rupture and discharge its contents or disappear by absorption. In either case, a scab is left, varying in size according to the size of the pustule, and when this comes off a round white scar is left to mark the site. Around this white scar a ring of pigment remains for some time which greatly assists in the diagnosis. Following the classic evolution of syphilis the severity of the pustular syphilide will depend much upon the time elapsing since the appearance of the chancre; thus the more superficial pustule comes as an early secondary, while the deeper seated, which usually develops on an inflamed base, appear as a late secondary. These larger pustules should not be confounded with the ecthymatous ulcerating gummata which appear during the tertiary period.

There is no condition likely to be mistaken for pustular syphilide unless the pustules should happen to be limited to the face, chest, and back, in which case one might think of an acne vulgaris. As a rule, acne comes on at or about the age of puberty and is always associated with comedones and excessive sebaceous secretion, while pustular syphilide usually comes at a later period in life and is associated

with glandular enlargements, mucous patches, and other signs of syphilis; and, if a syphilitic patient should be believed, much might be learned from the history of infection. Pustular syphilide has been mistaken for small-pox, where the pustules have shown a tendency to umbilication, but the evolution of a small-pox lesion is so exact and regular that no one should confound the two diseases.

The *pigmentary* syphilide is a rare occurrence and its existence is even doubted by many syphilographers. It usually makes its appearance during the latter half of the first year and is found on the neck and chest. It is thought by some to be a pigmentary deposit resulting from the erythematous syphilide and by others to be a distinct syphilitic eruption. Until the source of the pigment coloring matter has been definitely determined, we must remain more or less in the dark regarding the pigmentary syphilide. The curious feature of this manifestation is that it is uninfluenced by syphilitic treatment and after lingering for months will disappear of its own accord.

The only conditions likely to be mistaken for pigmentary syphilide are chloasma and tinea versicolor. In the former condition the spots of discoloration would not show the regular distribution with intervening normal colored skin, and in the latter the spots have a branny surface which becomes pasty on the application of moisture, besides the microscope reveals the spores of the microsporon furfur.

The vesicular syphilide is exceeding-

ly rare. Sometimes large vesicles appear within six months after the chancre. They are umbilicated, situated on a reddened base, and usually dry down and form a crust. More commonly, however, the vesicular syphilide is small and appears during the second year. These may be scattered over the body and limbs and are sometimes grouped in clusters or circles. Vesicular syphilide can be diagnosed from chicken pox by the absence of itching and the presence of other syphilitic symptoms. In vesicular eczema the vesicles coalesce and form a large oozing surface, while itching is present and syphilitic symptoms absent. The bronze color around the vesicular syphilide will also aid in diagnosing from all other vesicular eruptions.

The *papulo-squamous* syphilide may appear near the end of the first year or at any later period. It consists of a papular infiltration covered by fine, tightly adherent scales and may occur on the face or any other part of the body. The spots may appear singly or be grouped in patches or circles. So long as the infiltration lasts the scales will continue to form and peel off. Where the eruption occurs in a circle it begins as a circle and not from a central point. Sometimes it represents only a segment of a circle and these may unite and form an irregular gyrate lesion. The most frequent site is on the face and forehead (along the margins of the hair) and around the genitals. It may also occur on the palms and soles, as individual papulo-squamous lesions.

Papulo-squamous syphilide may closely resemble lupus-erythematosus and psoriasis. Lupus erythematosus is a new cell formation usually occurring about the nose and cheeks. It is a disease of slow progress and long duration. Papulo-squamous syphilide occurs on the face, along the margins of the hair, and on other parts of the body and would show the concomitant signs of syphilis. Psoriasis begins as small papular lesions situated on a reddened base and on removal show a bleeding point. They show a decided preference for the extensor surfaces and soon develop into large, dry, scaly patches. On the palms and soles papulo-squamous syphilide may resemble an eczema, but eczema shows irregular patches, shades off into the healthy skin and always itches.

The *tubercular* syphilide may occur as a generalized form or in groups, the latter being the more common. The generalized usually occurs near the end of the first year, while that in groups occurs during the second year. The tubercular lesion develops deeply in the true skin and occurs as patches or groups in circles or parts of circles. A single patch may be a solid elevation of the skin composed of several tubercles clustered closely together, rough on top and covered with scales. An individual tubercle is livid in color, afterwards coppery; the top is surmounted by a scale or pustule, and when it disappears usually leaves a white cicatrix. The ulcerating tubercular syphilide marks the border line between the secondary and tertiary periods. It may occur on any part of the body, but its favorite

site is on the face. The patch spreads by additions to the periphery, the central lesions becoming absorbed and leaving slight scars. Afterwards new lesions develop on the site of the old ones, and this process being repeated a number of times, the patch loses its integrity and ulceration takes place. There is no other condition for which tubercular syphilide could be mistaken if one carefully observes the central cicatrix.

The *pustulo-bullous* or *rupial* syphilide belongs to the tertiary period and occurs normally about the end of the second year, but an insufficient course of treatment following the initial lesion may postpone its appearance for years. I recall one case where a rupia appeared fourteen years after a six months' course of mercury, and another which appeared seven years after three months of treatment. A rupia may begin either as a pustule or a bulla. In either case, a crust is soon formed under which ulceration takes place. At first the scab is small, but as the ulcerative process continues to spread deeper and wider the crust is added to from beneath so that it becomes pyramidal or oyster shell in shape. When the crust is removed, another is soon formed. Owing to the admixture of pus and blood, the crust is blackish green in color. The ulcers have abrupt edges and may extend to the subcutaneous tissue. In shape they may be round or reniform. When a rupial ulcer occurs on the hairy portion of the body, unless arrested by appropriate treatment, permanent loss of hair will occur. When a rupial ulcer heals, it

leaves a livid scar which eventually becomes white.

The *pustular syphilide*, occurring during the tertiary period, may appear either as a single ecthymatous pustule or as a group of pustules under which ulceration takes place. The ecthymatous pustule, which is the more common, begins as a pustule with a gummatous infiltrated base. This infiltration soon gives way to ulceration and a crust is formed which at first resembles the rupial crust, but soon becomes depressed, tightly adherent, and may remain in situ till cicatrization has taken place. The scar left, after an ecthymatous ulcer, is soft and white and surrounded for a considerable time by a pigmented areola.

The ecthymatous ulcer may be found on any part of the body, but its favorite site is on the lower extremities. Where several ecthymatous ulcers coalesce, they may form a serpiginous lesion covering a considerable surface, healing on one side and advancing on the other.

The *pustular syphilide*, which occurs in groups, is a late tertiary. These pustules occur on a red base and quickly run together, forming a crust with an ulcerating surface underneath. The crust remains flat and does not become rupial. The scar left from a pustular syphilide is white and usually has a bronzed areola.

A *gumma* of the skin may occur as a general infiltration of the skin or as a localized tumor. Either form may ulcerate. Where there is a diffuse gumma of the skin, little ulcerative points appear on the surface which run

together, forming a large ulcer. The circumscribed gumma usually remains quiescent for several months, then softens in the center and the ulcerative process gradually approaches the surface, when the broken down tissue is discharged and the cavity remains as an open ulcer.

The tertiary syphilitic ulcer therefore results from a rupia, an ecthyma, or a

gumma. The ulcer may extend deeply or run on the surface as in the serpiginous form. The ulcer has abrupt edges, with a soft floor.

Unless involving the bone or periosteum, a syphilitic ulcer is painless, and the absence of subjective symptoms, together with the characteristic appearances of the ulcer, should make the diagnosis of syphilis a matter of ease.

Ocular Manifestations of Syphilis.

By EDWARD JACKSON, M. D., DENVER, COLO.

It should be remembered that the initial lesion of syphilis may occur upon the lids or conjunctiva. About one hundred cases of this kind have been reported. History of contamination is usually wholly wanting, and the sore is characterized by a slow course, great swelling and induration, and comparatively little pain.

Iritis is usually a secondary symptom, but its sequels may be looked for to throw light upon the diagnosis at a late stage. Too much importance is readily attached to their presence or absence. Between 40 and 50 per cent. of all cases of iritis are not of syphilitic origin; and of all cases of syphilis but 3 per cent. suffer from iritis. Brunson (*Ophthalmic Record*, Nov., 1899) thinks that of well treated cases of syphilis not more than one in five hundred would suffer from iritis. Even if iritis has occurred, if properly treated from the onset, it will probably leave no trace in after years; and even if untreated all evidence of its occurrence

may in time disappear. So, if a patient presents no sequels of iritis it is no indication that he has not had syphilis. If he has had iritis it is nearly an even chance whether he has had syphilis or not. In those cases in which iritis does occur syphilis is likely to prove severe and prolonged careful treatment is especially important.

Iritis does also occur as a tertiary lesion, in connection with gumma of the iris, with interstitial keratitis, and without notable lesions of the cornea. A chronic form of iritis affecting especially the periphery and closing the filtration spaces at the angle of the anterior chamber, ends in syphilitic glaucoma, usually many years after infection.

Interstitial keratitis is not always syphilitic. But the typical cases, with salmon colored patches of vascular loops running out from the corneal margin, and opacity slowly increasing, and slowly clearing up from the periphery toward the center of the cornea,

are always of this origin. These typical cases commonly occur in the childhood or youth of victims of inherited syphilis. But they may occur later in life. Interstitial keratitis also occurs late in acquired syphilis, but all such cases that I have seen were more or less atypical. Interstitial keratitis, even when occurring in a patient clearly suffering with inherited syphilis, may be closely associated with some other dyscrasia. I have seen it evidently thus related to acute articular rheumatism. Gumma of the cornea may occur in the course of interstitial keratitis. Gumma of the ciliary region may lead to permanent thinning of the sclera and staphyloma.

It is rather striking that a disease which affects so widely structures of epiblastic origin does not appear to be a special factor in the causation of cataract. Cataract does occur in syphilitics, sometimes by mere coincidence, but sometimes as a result of extensive disease of the uveal tract, upon which the nutrition of the crystalline lens depends.

The transparency of the vitreous suffers more frequently, the typical lesion being the dust-like opacity; and often this appears without any certain evidence of lesions of the uveal tract. But choroidal lesions are generally, and perhaps always present. Lens opacities appear when the uveal changes are of long standing, and have given ample opportunity for their previous recognition. Vitreous opacities come with the first onset of the choroidal disease, and may never clear up sufficiently to reveal the latter, or may do so only

after a long time when the patient has passed from under observation.

The syphilitic lesions of the choroid are varied and usually not characteristic. But they all include, when fully developed, disturbances of pigment, its massing in black spots or blotches and removal from areas of partial atrophy. When these spots are small, rounded and scattered throughout the fundus I have thought them most characteristic of this disease. But the lesions of syphilitic origin may run by all intermediate forms into the most typical appearances of chorio-retinitis, or of retinitis pigmentosa.

Syphilitic chorio-retinitis comes on during the secondary period, but continues well on in the tertiary stage. Its speckled fundus, specks of membranes of grayish exudate, dust-like opacity of the vitreous which later disappears, impairment of vision and opaque nerve-head, are very characteristic. The share of inherited syphilis in causing retinitis pigmentosa is still uncertain; but a few cases presenting the same retinal lesions, and commencing later in life, commonly near middle age are clearly due to acquired syphilis.

Optic neuritis, and neuro-retinitis are sometimes tertiary lesions of syphilis. In one case I saw them three months after the initial lesion, contemporaneous with the first eruption, and followed a month later by iritis. The appearance and clinical course of the case does not reveal its origin. The neuritis may or may not be followed by optic atrophy.

Tarsitis, dacryo-adenitis and gumma of the orbit occur, and there is a form of chronic tertiary ulcer of lids or con-

junctiva with great swelling of its margins, which only treatment will differentiate from malignant disease.

Sixty per cent. of the palsies of ocular muscles are due to syphilis. But these depend on brain or nerve lesions.

Finally in the treatment of the ocular lesions of late syphilis mercury must still be regarded as essential, but not in such amounts as to impair the general nutrition.

Tertiary Manifestations of Syphilis of the Ear.

By P. F. GILDEA, M. D., COLORADO SPRINGS, COLO.

One hesitates to write anything on the above subject since he is confronted by the fact that authors, the few who have written on this subject, fail to give any symptoms which are peculiar to disease of the middle ear. Sudden deafness is brought prominently forward as a symptom of this trouble, and yet how many diseases, even those where the symptom is bilateral, are characterized by this sign. When one meets with this symptom, even where the patient has the disease in other parts, one is left in doubt whether the ears are involved at all, or whether one has to do with a lesion in the floor of the fourth ventricle. The distinction made by some writers in separating this disease from tuberculosis of the ear, that in tuberculosis the drum is more pale, is of very little value, because we may have a combination of an acute catarrhal condition with either syphilis or tuberculosis of that part. The same may be said of other given symptoms. The cases I have had in which I was comparatively sure of my diagnosis have been few, as in the routine of hospital work and of private practice the earlier manifestations in the nose, throat, or lung are so much more prom-

inent that the ear is apt to be overlooked. Men like the late Prof. Gruber, Prof. Pollitzer, and others who have control of a large amount of material claim to have seen characteristic mucous patches in the middle ear, that gummata exist, and that specific treatment has produced results as definite as those obtained in other parts of the body. Personally I have no reason to doubt their statements, for although I was not able to follow any individual case to the end yet the cases shown to me were convincing, though few. The cases which in ordinary ear practice show evidence of syphilitic taint are those in which the ear lesion is so very slight that there seems to be no definite symptom to treat beyond slight deafness, tinnitus, or other subjective signs. Examination of the middle ear shows very little except a retraction of the drum, some slight closure of the eustachian tubes, and other signs of hyperplasia. Inflation of the middle ear does not increase the hearing, neither does it stop other uncomfortable symptoms. Treatment in these cases is of no avail unless iodine in one of its forms be introduced into the middle ear, with pilocarpine hypodermically, or iodide of po-

tassium, or mercurial inunctions. These cases are not, as a rule, attributed to constitutional taint, and yet I am inclined to believe that they are as much so as ulcer of the cornea or any skin diseases.

The purpose of my short paper today is to advocate the thorough trial of anti-specific remedies in obscure ear trouble as often as in obscure diseases of other organs. I have often wondered why the aurist does not make use of Justus' procedure for the early detection of a constitutional cause for

some of the obscure cases in his line as any of the other specialists, especially since the technique has been so simplified that a man with ordinary laboratory training can make use of it. I believe the near future will see the placing of this method by the side of Ehrlich's diazo-reaction and Widal's test. I have not mentioned syphilis of the external ear, as it is most often in the province of the skin specialist; or that of the internal ear, since this region of usual shadow becomes at once involved in dark impenetrable night.

Syphilis of the Throat.

By F. P. GALLAHER, M. D., DENVER, COLO.

In our limited time it is our purpose to briefly discuss syphilis of the fauces, pharynx and larynx.

In the fauces syphilis manifests itself in the three commonly accepted stages; primary, secondary and tertiary. In this region the initial lesion is found most frequently on the tonsil. Chancre of the tonsil was at one time considered extremely rare, owing no doubt to its having been overlooked; but since better attention has been paid to the throat statistics show that it is becoming more common. Taylor, in his late work on syphilis, reports eighteen cases of primary chancre of the tonsil. The tonsillar tissue varies in different individuals, being smooth or rough according to the amount of hyperplasia which may be present, and the appearance of the chancre is correspondingly modified. As in other parts

of the body there will be as many initial lesions as there are distinct points of inoculation. Taylor reports several cases in which the lesions were found in both tonsils and one case in which not only both tonsils were involved, but the posterior pharyngeal as well. Dr. W. P. Munn, of this society, reports a case of simultaneous appearance of chancre on the tongue and tonsil. Chancre on the tonsil never presents a definite typical appearance. Examination will reveal early in its course that the chancre is hard, in some cases distinctly circumscribed, in others diffuse, involving not only the entire tonsil but the peri-tonsillar tissues. On its surface it may be but slightly red. In a short time it will show a sluggish ulceration covered with a membrane presenting an appearance somewhat like that of a mucous patch. It must

be remembered that the tonsil is made up of lymphoid tissue, richly supplied with blood vessels and lymphatics; hence we would naturally expect that a chancre in this region would vary considerably in its characteristics from a chancre occurring on the skin or on an ordinary mucous membrane. The tissue changes in extra-faucial chancre are confined mostly to the epithelial layer, while in the tonsil the cellular infiltration not only involves the superficial structure, but proceeds along the course of the lymphatics and smaller blood vessels, involving a much larger area and extending deeply into the gland. Owing to the reasons mentioned above, chancre of the tonsil is quite large and characterized by considerable destruction of the tissue. The earliest symptom is painful deglutition, which persists regardless of treatment. Enlargement of the tonsil continues, and very soon the sub-maxillary and cervical glands become enlarged, corresponding to the affected side.

Erythema of the fauces, occurring early in the secondary stage, consists of a passive hyperemia producing a dark red color, but with no perceptible swelling. As a rule there is a sharp line of demarcation between the hard and soft palate. This manifestation in the fauces is perfectly analogous to the cutaneous eruption.

The mucous patch, although occurring most frequently in the early stages of the disease, may occur at any period. It is similar in structure to initial lesion, there being at first a round cell infiltration in the deeper layers of the mucous membrane with serous exudation, and

more or less erosion of its surface presenting a necrotic appearance. Exclusive of the tongue and the mucous surfaces of the lips, it is found most frequently on the tonsils, uvula, velum palati and its pillars. Occurring upon a hypertrophied tonsil a mucous patch is often accompanied by so much infiltration and the parts are subjected to so much friction incidental to deglutition that considerable ulceration may result.

Gumma of the fauces is not infrequent, and it should be pointed out that it is sometimes precocious, developing as early as the fourth or fifth month after the appearance of the initial lesion. I have lately seen a case with a clear history in which gumma of the soft palate occurred $4\frac{1}{2}$ months after the appearance of the chancre, which almost destroyed half of the soft palate. It has been commonly taught that gumma only appears in the later stage of this disease, but our syphilographers are now convinced that, especially in the fauces, gumma occurs much earlier than was formerly supposed. Many of the so-called superficial ulcerations in the fauces are nothing more nor less than the breaking down of gummatous deposits. It is of the utmost importance to diagnose a gumma in this region, as the rapidity of the breaking down may be so great as to destroy the integrity of the palate, producing the usual serious consequences to the patient. The recognition of a gumma in its early infiltrative stage is sometimes difficult, it not being painful, although hard and resisting. It must be diagnosed from benign and malignant tumors and from acute and chronic in-

inflammations. Indeed, its character may not be definitely determined until after the therapeutic test is made.

Deep ulcerations of syphilis caused by the breaking down of a gumma are easily diagnosed, characterized by a well marked areola, with the surface of the ulcer markedly depressed below the surrounding mucous membrane and covered with more or less secretion of pus. With the exception of the ulcerations of tuberculosis and lupus, all ulcerations of the fauces should be regarded as extremely suspicious as manifestations of syphilitic infection, and in an overwhelming majority of instances will be found to be such. It will be necessary to diagnose syphilitic ulceration from that of tuberculosis and lupus. The following cardinal points will suffice:

Syphilitic Ulceration.—Deeply excavated. Bright red areola. Sharply defined. Bright yellow purulent discharge. Free discharge. Rapidly destructive. Extends deeply. Constitutional disturbance not marked.

Tubercular Ulceration.—No apparent excavation. No areola. No well defined edges. Grayish mucous discharge. Scant discharge. Slowly destructive. Extends laterally. Constitutional disturbance marked.

In lupus there is no excavated surface, no yellowish ulceration, no pus-secretion, and no areola; lupus progresses very slowly.

Syphilis attacks the pharynx in all its stages. The erythema is very frequent, while the mucous patch is singularly rare. Gummatous deposits and the resulting deep ulcerations occur com-

monly in this region. The points for differential diagnosis are precisely the same as those for the fauces and need not be repeated.

In the larynx syphilis occurs in the primary, secondary and tertiary stages. Moure reports one case of the initial lesion occurring on the epiglottis, which was followed by the usual manifestations. Syphilitic erythema is rather frequent. The mucous patch, according to some observers, does not occur in the larynx, but it is the consensus of opinion among laryngologists that it undoubtedly occurs and is simply overlooked. Bosworth describes two forms of ulceration in the larynx—superficial and deep. He states that the superficial ulcer may develop from a mucous patch, or be primarily the result of the breaking down of a superficial gummatous infiltration. Indeed, the mucous patch, superficial and deep ulcerations are essentially the same in character, the difference being only in degree. In the mucous patch the infiltration is in the epithelial layer of the mucous membrane, while in the ulcerations the infiltration extends more or less deeply and involves a greater area. The gumma is found in two varieties in the larynx; presenting as a distinct tumor or tumors, or as a diffuse infiltration. As in the fauces the gumma, on breaking down, leaves the deep ulceration which is so characteristic. The cicatrization following may produce considerable stenosis. The diagnosis of syphilis of the larynx is practically the same as that of the fauces, remembering the slight modifications which the histological structures would na-

turally make. In conclusion I desire to say that owing to the limited time it has been impossible for us to more fully discuss this subject.

Bone and Joint Syphilis.

By W. W. GRANT, M. D., DENVER, COLO.

Syphilis of the bones and joints is not, as might be inferred by some, a disease only of the late or tertiary form. Disease of the epiphyses and synovitis is not very infrequent even in secondary syphilis, and especially when not treated early and properly. It is doubtless true that many cases of bone and joint syphilis, both hereditary and acquired, are treated as tuberculosis. It is important to make the distinction, and yet at times it is not easy.

The smegma bacillus and the Lustgarten and Koch bacillus resemble each other so closely that, as in the case of the colon and Eberth bacilli, only one well-versed in pathology and the use of the microscope can satisfactorily determine their character and nature, respectively, and this is not always practical or feasible.

If there is a tubercular tendency or predisposition in a syphilitic subject, severe nasal, as well as other bone lesions, are more certain to occur. Necrosis and deformity of the nose frequently result, and with these manifestations the profession is quite familiar. If hereditary, the palate is not infrequently involved.

Dactylitis may be acute or chronic. In the former the joints are most certain to be invaded secondarily. The

chronic is a specific osteomyelitis and periostitis. The bluish discoloration and cylindrical swelling usually of the entire finger or toe is characteristic; suppuration and necrosis sometimes follow. It may be hereditary or acquired, and is a late manifestation of the disease. Osteochondritis inflammation and swelling at the epiphyseo-diaphyseal junction in the form of a ring or globular swelling in infants and children is always a manifestation of inherited syphilis. It is peculiarly diagnostic. I have known such a case to be ascribed to tuberculosis, and to be operated on, but finally cured by specific treatment.

Syphilitic periostitis is usually co-existent with ostitis and ordinarily is a late expression of the disease. If associated with gummata and the periosteum is detached, necrosis is likely to occur.

Synovitis occurs in both acute and tertiary syphilis. The acute affection, with effusion and swelling and pallor, is not usually painful and is generally limited to one joint. There is no actual lesion of the parts. The chronic form is more painful and severe, and serious lesion of synovium and cartilage more certain, with consequent impairment of motion. Suppuration is

also more apt to occur in this form. The knee, ankle, wrist and hip joints are most apt to suffer. The flat bones—tibia, sternum and cranium—are most certain to be involved. Small, round cell infiltration is common in bone syphilis, filling the Haversian canals, absorbing the trabeculae and producing the condition known as rarefying osteitis. Reparative efforts follow and enlargement, or hyperostosis, and condensing osteitis result. There is no tendency to pus formation or to necrosis, but osteophytes and ex-ostoses occur, as in arthritis deformans of the hip joint.

When suppuration occurs, it is due to the degeneration or breaking down of gummata.

Gonorrhoea as a causative agent in the acute synovitis of adults, and syphilis in the same relation to epiphysitis, are too frequently overlooked.

Disease of bones and joints in adults, as well as children, is almost uniformly credited to tuberculosis as the etiological factor. Besides other bone lesions there is good authority for the statement that many of the cases of hip-joint and Potts' disease of children are caused by hereditary syphilis. It is of more than ordinary importance to make a correct differential diagnosis, for in syphilis there is no tendency to pus formation and to necrosis, while such tendency is most common in tuberculosis. Operative interference is seldom required in syphilis. It is demanded with exceeding frequency in tuberculosis. Syphilis is specially and most favorably affected by proper medication, while tuberculosis is little influenced by

it. Suppuration is common to all forms of tuberculosis and it is not so localized in its action.

Night pains are characteristic of bone syphilis. A careful and thorough examination of the individual and family history will enable the physician and surgeon to form a rational conclusion as to the nature of the disease, aided, if need be, by therapeutic measures which should always favorably affect syphilitic conditions. In obscure or doubtful cases the latter should never be omitted, as a syphilitic vice, whether hereditary or acquired, must unfavorably affect any disordered state of the bones and joints, or operation intended for their relief.

The treatment is the same specific medication to the same stage of the disease involving other structures. If suppuration and necrosis occur the ordinary surgical procedures appropriate to such conditions should be employed, aided always by specific therapeutic measures; for our chief resource in bone and joint syphilis must be the remedies usual to other forms of the disease.

ROCKY MOUNTAIN INTERSTATE MEDICAL ASSOCIATION.

The second annual meeting will be held at Butte, Montana, August 28-29, 1900. It is to be hoped that there will be a good attendance and program. It is thought that a one-fare rate for the round trip will be obtained.

Injuries to the Eye from Accidents in the Mine.

By MELVILLE BLACK, M. D., DENVER, COLO.

Professor of Ophthalmology and Otology, Gross Medical College.

(Continued from May and June Numbers.)

Injuries to the Iris.

The iris may be involved directly or indirectly from an injury to the eye. From *direct injuries* it may be wounded from the penetration, or the lodgment in it, of foreign bodies, or it may be torn partially or totally from its peripheral attachment, or it may be folded back upon the ciliary body, or upon itself.

When involved from *indirect injuries* the iris is not actually wounded, but may be sucked into some adjacent wound of the cornea or ciliary body. A contused wound of the globe may produce partial or total paralysis of the iris, or a blood-vessel may be ruptured in it, causing hemorrhage into the anterior chamber (hyphemia), or it may be ruptured at its periphery.

A simple penetrating wound of the iris causes no serious damage to that membrane unless the wound is badly infected. Such a wound might be hard to diagnosticate, were it not for evidence in the cornea and lens of a wound having of necessity passed through the iris. No treatment, insofar as the iritic wound alone is concerned, is indicated, except the use of atropine to dilate the pupil.

A foreign body lodged in the iris in many instances can be plainly seen, and

when its presence in the iris can be diagnosticated, its removal should be attempted by performing an iridectomy of that portion of the iris containing the foreign body.

Iridectomy.—The eye is rendered aseptic, then anesthetized with holocain. The cornea is penetrated close to its junction with the sclera with a keratome, the eye being held steady the while with a pair of fixation forceps. A pair of iris forceps is passed into the anterior chamber, then opened, when a portion of iris is grasped and pulled out between the lips of the wound and cut off close to the cornea with a pair of curved iris scissors. The after-treatment would be the same as for any penetrating wound of the eye.

Rupture of the iris at its periphery, whether from direct or indirect violence, is always followed by hemorrhage into the anterior chamber. If the latter is not ruptured and the patient is in an upright position the blood will settle to the bottom of the anterior chamber. If patient lies upon his back it settles over the iris and obscures it. Owing to the hemorrhage it is usually not recognized at first that the iris is torn at its periphery, and a true recognition of the existence of the rent may

not be possible until the blood in the anterior chamber is absorbed. This is especially true if the iris is torn from its attachment below. The diagnosis of such a detachment is to be made with the ophthalmoscope, when it will be possible to observe the reflex from the fundus, not only through the normal pupil, but through the peripheral hole as well.

The treatment consists in the use of atropine and hot applications, the former to dilate the pupil, thus crowding the iris and closing the rent that it may heal. The use of hot applications is intended to increase the activity of the blood and lymphatic currents, and thereby hasten the absorption of the blood. It is very possible that such an injury as a result of direct violence to the iris would cause such extensive intra-ocular lesion that serious iritic complications would follow, and that the treatment indicated would be governed by the condition as a whole. This will be dealt with later.

When the *iris is folded back* upon the ciliary body or upon itself it is extremely difficult to replace it. It is a very delicate membrane, and any attempt made to replace it in its normal position with forceps would be attended with worse than failure. By manipulation of the globe immediately after the injury it is sometimes possible to work the iris back into position; but even this is dangerous if the corneal wound is large. When it cannot be replaced by such means it should be left alone, or the portion folded back can be pulled out and iridectomized.

Incarcerated, or prolapsed iris in a

corneal wound is the result of the gush of escaping aqueous humor of the anterior chamber. The iris is carried out with it, and when once out it is kept out by the constantly escaping current of newly formed aqueous. If it is replaced it prolapses again in a very short time unless the corneal wound is very small, and not inclined to leak when freed of the iris. Usually it is necessary to grasp the prolapsed iris with forceps, pull it out of the wound a little and snip it off with scissors close to the cornea. If any iris remains clasped in the corneal wound, it should be pushed back into the anterior chamber with a horn spatula, where it will now remain.

The treatment consists of iced cloths constantly applied, and atropine every three hours.

A contused wound of the eye may cause a *general intra-ocular paralysis*, either temporary or permanent. The symptoms are a partially dilated and immovable pupil and suspension of the accommodative effort. As a rule this condition is only temporary and is caused by nerve shock, with temporary suspension of the nerve conduction. The treatment consists of hot applications and galvanism.

Hemorrhage from the iris from a contused wound of the eye may occur from the rupture of a blood vessel in the iris. Its presence is easily recognized from its color and its situation in the anterior chamber. It forms a distinct red line along the lower portion of the chamber if the patient is in an upright position. When the hemorrhage is very extensive the anterior chamber may be completely filled. The

technical term for blood in the anterior chamber is *hyphaemia*. The treatment is the local application of hot fomentations to the eye ten minutes out of every

two hours. It is not necessary to use atropine unless symptoms of iritis become manifest.

CHAPTER VII.

Injuries to the Lens.

A penetrating wound of the lens will cause it to become more or less opaque from the action of the aqueous humor upon its exposed layers. This condition is known as traumatic cataract. The action of the aqueous humor is to absorb the lens substance after it has turned opaque, but in adults over thirty this action of the aqueous is very slow. The lens often becomes greatly swollen, and in consequence the tension of the eye is increased, sometimes beyond the point of safety, when it becomes necessary to remove the lens. This is done by what is known as the operation of linear cataract extraction, and is performed as follows:

Linear Cataract Extraction.—The eye and the adjacent parts are rendered aseptic. An eye speculum is introduced between the eyelids to hold them well apart, after the eye has been rendered anesthetic with holocain. The eye is grasped below with a pair of fixation forceps and held firm, while the sclero-corneal junction above is being opened with a keratome. The iris is now grasped with a pair of iris forceps and pulled well out between the lips of the wound and cut off close to the cornea with a pair of curved iris scissors. The anterior capsule is now freely opened with a cystitome. Two lens spoons are now used to make pressure above and

below the cornea to force out the lens matter. If it does not come out readily, introduce the upper spoon into the lips of the wound, and even into the soft lens matter, to provide a sort of trough for the lens matter to flow out over, facilitating its flow the while by making gentle pressure below the cornea with the other spoon. After the soft lens material has all been removed the lips of the wound are freed of foreign matter and are seen to coaptate. The eye is closed and dressed with the wet bichloride dressing in the manner already described. The dressing should be removed the next day, and after freeing the lids of all secretion it should be replaced. In case inflammatory symptoms arise and evidences of infection become manifest, they should be combatted by antiphlogistic methods already described. The use of atropine is usually advisable.

In case it is deemed best not to operate upon an injured lens, it will in itself demand no attention beyond the inflammatory reaction it may produce from swelling of its layers. In case the penetrating wound of cornea or sclera, through which the lens has been injured, has closed, the tension of the eye may become so great as to demand paracentesis of the cornea with evacuation of some of the aqueous. This little op-

eration may be performed daily, if necessary, without any special danger. Atropine and iced applications should be used to control the pain. If the eye is free from pain the wet bichloride dressing is to be preferred.

Dislocation of the lens.—The lens may be dislocated into the posterior or anterior chamber, or may escape through a sclero-corneal wound under the conjunctiva, or it may escape from the eye entirely.

If *dislocated into the posterior chamber* it is to be let alone until it creates disturbance. Its successful extraction may sometimes be accomplished by proceeding as for regular cataract extraction. Then by gentle manipulation of the globe the lens may float up into position, and may then be induced through the pupil and so out of the eye. If such procedures do not avail, a fenestrated spoon may be introduced in the direction in which the lens is supposed to be, and, by getting the spoon under it, it may be engaged and removed. This operation is usually attended with free loss of vitreous and collapse of the globe. Such a collapsed eyeball tends to suck in fluid from the conjunctival sac. To prevent this and the coincident possibilities of infection, Knapp recom-

mends the injection into the eye of a normal salt solution to replace the lost vitreous.

In case the *lens is dislocated under the conjunctiva* it is almost needless to say, open the conjunctiva and remove it.

The after treatment for an eye operated upon for the removal of a dislocated lens, consists in first putting up the eye in a wet bichloride dressing. If marked inflammatory symptoms appear they should be combatted by anti-phlogistic methods.

It is to be remembered that an eye without its lens is aphakic, and in order to have distinct vision the lost lens must be replaced by another worn in spectacles. The strength of the correcting lens required depends somewhat upon the former refraction of the eye, but it is usually a ten dioptric lens. It is useless, however, to prescribe such a correcting lens if the fellow eye is normal, because the images formed upon the retina of the two eyes will be so dissimilar in size that fusion cannot take place and the patient will, in consequence, see double. Therefore, so long as he has one perfect eye, the refraction of the aphakic eye is not corrected with a lens.

CHAPTER VIII.

Injuries to the Ciliary Body.

An injury to the ciliary body is very liable to cause sympathetic involvement of the fellow eye. The nature of the injury makes some difference. If the wound in the ciliary body is made with a sharp, clean instrument and the foreign body has not been retained, it is

less likely to be followed by sympathetic inflammation than if the wound is a ragged one made with a septic instrument. The reason for this is that in the former instance healing will be more perfect and very little reaction will follow; whereas in the latter con-

dition the wound is not of a character to heal smoothly, and infection is sure to result, causing at best a slow healing process with long inflammatory symptoms. We should never give a favorable prognosis in wounds of the ciliary body, but should instruct our patients to be on the lookout for symptoms of sympathetic involvement of the fellow eye.

The management of a ciliary injury is in itself comparatively simple. The wound should be freed of all foreign matter and all prolapsed material by removal and excision, atropine instilled and iced cloths applied. The atropine should be used every three hours. This paralyzes the ciliary body, thus keeping it quiet. The iced applications keep down the possibilities of infection, and thus prevent inflammatory reaction. The two together afford the patient relief. If, after the third day no marked inflammatory symptoms have developed, the eye may be put up in a wet bichloride dressing. Do not forget to keep close watch on the fellow eye.

(To Be Continued)

ACTION OF THERAPEUTIC SERUMS.

Dr. Antonio Fanoni reviews in *Pediatrics* of May 15, the action of therapeutic serums, with especial reference to Pane's serum in lobar pneumonia.

It is only within the past decade that scientific observers have begun to work on serum therapy, but the knowledge already gained concerning the value of this therapeutic measure in the various infectious diseases promises a great deal.

The action of the antidiphtheritic and antitetanic serums, in animals as well as in man, indisputably takes place against their respective toxins by counteracting the intoxication of the organism.

The efficiency of Pane's serum in lobar pneumonia has been recognized by impartial observers, such as De Renzi, Maragliano, Cantieri, Massalongo, and a large number of practitioners, Italian as well as foreign.

In the four cases of pneumonia in children which I treated with the serum there was no doubt as to the efficiency of Pane's remedy. All these children recovered after a few day's treatment. Of the last two cases, one seen by me with Dr. Luzzato, was eighteen months old, and received four injections of Pane's serum. In the other, a child of two years, that I saw with D. Corsiglia, three injections of the serum were sufficient to establish a cure.

This serum, when injected in cases of pneumonia early enough, in sufficient quantity (forty cc. of No. 2 daily), and if not deteriorated by age, quickly produces a lowering of the temperature and an improvement in the subjective comfort of the patient, as well as an amelioration of all the other symptoms. Resolution also tends to take place more rapidly.

The objection that has been made that the pulmonary lesion does not disappear rapidly enough after the injection of the serum has no value when one considers the pathological anatomy of fibrinous inflammation of the lung which has reached the stage of hepatisation.

TREATMENT OF ABORTION.

Dr. J. S. Beer contributes an article to *Obstetrics of May* on this subject.

When it is considered that a large percentage of the cases of chronic pelvic inflammation can be traced to a neglected or improperly treated abortion, the importance of a discussion of the subject of this paper will be conceded.

In the treatment of these cases the same surgical principle is involved that obtains in the treatment of lacerated wounds in any part of the body. No surgeon would for a moment think of leaving a mass of devitalized tissue in a wound to decompose and interfere with rapid healing, and to endanger the patient's life by possible septic infection.

In inevitable abortion hemorrhage will be profuse, the os dilated, and the membranes or fetus presenting; the patient will be having, or will have had chills, more or less severe, and fever rising perhaps as high as 105 degrees Fahrenheit, dropping to normal as soon as the uterus is emptied. This fever is largely nervous in origin. I have seen it drop to normal after a dose of valerian.

At this stage I would urge the use of the vaginal tampon, properly applied, as it places the patient beyond any danger from hemorrhage. There is also less danger of septic infection if the vagina is filled with antiseptic material. Again, it stimulates uterine contraction, and by retaining the blood within the uterus, favors a more perfect separation of the placenta and membranes, and assists the expulsion of the fetal sac, often with the membrane unruptured.

By incomplete abortion is meant the

expulsion of the fetus and retention of the whole or part of the placenta or membranes. And by far the larger number of cases that we are called upon to treat belong to this class. The treatment of these cases depends upon the condition they are in when first seen. If at about the fourth month, after the placenta is fully formed, and if there is no fever nor odor to the discharges, the tampon may be tried and sometimes, the uterine contents will be found loose in the vagina upon its removal.

Curettage is an operation that should not be undertaken with the idea that it is a simple one. The size and position of the uterus should be ascertained and fixed in mind. If the walls are thin and relaxed or soft and boggy, it should be remembered, and the degree of force regulated accordingly. The best instrument, in my opinion, for cleansing the uterus is the instrument used for this purpose by Professor B. F. Bear of Philadelphia.

This work should, in nearly every case, be done under anesthesia, because then you have full control of the patient and are less liable to cause traumatism. The forceps are introduced guided by the finger, and the blades separated, when any shreds or portions of the placenta present will drop between them and can be withdrawn. The forceps are then separated, and one blade used as a curette, when the uterus can be thoroughly cleared of all fragments. This is, of course, done under antiseptic precautions; the uterus is then irrigated and packed lightly with iodoform gauze, as is also the vagina. Ergot should not be used until the uterus is emptied, as it locks up the uterus, places it in a condition of tetanic contraction and renders the manual efforts much more difficult.

THE COLORADO MEDICAL JOURNAL

AND
WESTERN MEDICAL AND SURGICAL GAZETTE.

A Monthly Journal for the Medical Profession of Colorado and Adjoining States.

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No. 7.

EDITORIALS.

THE WOMEN PHYSICIANS OF THE WEST.

What are the women physicians of the Rocky Mountain region doing in and for their profession? How many of them can lay any claims to be considered "representative physicians" and upon what could such claims be based? These questions are propounded as the result of several conversations recently held with members of the profession of both sexes, and are left unanswered that they themselves may have the opportunity to reply.

The woman in medicine is now no new thing nor an infrequent one. She

is sufficiently numerous and has been in practice a long enough time to have made her place in the profession. While some have attained eminence, and corresponding recognition and praise, in most localities they may be regarded as practical nonentities. For example, in St. Louis with its more than a thousand physicians, the women physicians who are regarded by the profession at large as "representative" can be counted on less than the fingers of one hand. What can be said of them here we leave them to formulate.

One criticism may be offered. They

do not recognize their duties to the profession. Sex should not be allowed to play any part in that respect. Every physician has certain debts to every other physician, which, however, many ignore. Among these is that of promoting the general interests of their fellow practitioners and increasing the spread of general medical knowledge. This involves membership and active participation in the organizations having that object for their basic principles. Every physician should be a member of the national, state and representative local medical societies. Then if the time and money at one's disposal for such purposes be not exhausted, the various special and restricted societies have a right to be considered, but not otherwise. How many women physicians of the Rocky Mountain region are members of the American Medical Association we do not know. There are fourteen who hold membership in the Colorado State Medical Society. Ten belong to the Denver and Arapahoe Medical Society. This is not a very flattering showing, but when it comes to the matter of active participation the spectacle becomes much sorer. At the recent meeting of the Colorado State Medical Society but one paper was presented by a woman. During the entire last year no woman physician presented a paper before the Denver and Arapahoe Medical Society.

One single paper represents the sum total of the contribution of the women

physicians of Denver and Arapahoe county to the advancement of the general medical profession. What a stupendous monument to their energy and public spirit! They may urge in their defense that they have their own women's medical society, the Denver Clinical Society, and do their duty in that. Let us see. In the first place, that society is properly classed with the special and restricted societies, membership in which should supplement and not supplant that in the general societies already mentioned. Again, its membership is but twenty-five, with an average attendance of six or eight, and during the past year they have read but nine papers. Truly they are doing nobly by their profession! Do they fairly represent the women physicians throughout the rest of the Rocky Mountain region?

Another query might also be pardoned in this connection. Are they similarly lavish in the support of either or all of their three local medical journals? We refrain from any attempt at reply to this question, as it is obvious that our information could not be regarded as approximately correct in reference to any but one.

The women physicians, and a great many men physicians too, should bear in mind that it is not their success in building up large practices which makes them representative. That requires but a modicum of medical knowledge and strength if they are gifted with tact in handling the people. It is only by

intellectual association with their fellow practitioners that professional respect and honor may be compelled—and compelled is the proper term to be used—for such do not come except when earned by exceedingly hard work and persistent effort.

THE COLORADO STATE MEDICAL SOCIETY.

The recent meeting of the society, held in Denver last month, was in many ways a success. The scientific program was unusually good, as the readers of THE JOURNAL who were unable to attend will be able to judge from the papers to appear in its pages. The scientific exhibit was an innovation which created considerable interest and flattering commendation was not lacking. Socially, too, there seemed to be great satisfaction.

In the matter of attendance there is room for difference of opinion. In 1896 there were 128 registered as attending; in 1897, 140; in 1899, 135. There were officially registered this year, 146; of these, 99 were from the city of Denver and 47 visitors. It is, of course, possible that a number who were in attendance did not register.

While this shows some increase over the attendance of previous years, still it is far from satisfactory when we take the medical population of the state into consideration. The presence of only about 40 Colorado physicians not residents of the capital is evidence of a woeful lack of interest throughout the

state. The profession of Denver has no more reason to compliment itself than that of the state at large. There are about 400 physicians in that city. An allowance of 25 per cent for irregular practitioners leaves still 300 physicians who owe allegiance to the state society. How many of these are there who honestly could not find time to visit the sessions of the society, if only once during the three days? The worth of the scientific program has not received the appreciation due it from the profession. It is usually the case, however, that those who are really in the greatest need of the advantages which such association meetings provide are the very ones who appreciate that fact the least. Their very lack of interest is the *prima facie* evidence of their professional deficiencies. With that reflection, those who expend their time, energies and money in building up the society must perforce be satisfied.

SMALLPOX AND ITS PREVENTION.

Now that the summer scare of smallpox is on hand, every individual is hoping that the Health Board will secure the quarantine of all suspects. The public can comfort themselves with the knowledge that they are well protected from a spread of the infection, for not only has the State Board of Health enforced a rigid inspection in all cities having any cases of smallpox, but more especially has the local Board of Health exercised a super-

vision over Denver, which bids fair to stamp out this pest. The Health Commissioner, Dr. T. C. Carlin, has employed physicians whose sole duty it is to vaccinate all of the colored population.

Those individuals who refuse to permit the Health Inspector to vaccinate them are rapidly brought into submission by the presence of the accompanying police officer, whose duty it is to look after the refractory members of the unwashed horde.

The systematic and vigorous manner in which the City Health Department is dealing with this outbreak of smallpox deserves the commendation of the medical profession and laity.

AN EXPLANATION.

The delay in the appearance of the June and this number of *THE JOURNAL* was due to the failure of the firm doing our printing. While the last number was in press they were attached and their career as a business firm terminated. To extricate *THE JOURNAL* from the debris of their downfall required both time and patience. Our tribulations in that line are now at an end, and we trust that we shall not encounter more such breakers in our future course.

ANNOUNCEMENT.

THE JOURNAL again gives to its readers the proceedings of the recent meeting of the State Medical Society long in advance of the official publication. We have secured the very cream of

the papers read at its sessions. In this number we had intended giving the two principal addresses, but the confusion incident to the change of printers and the time required to send proof to the authors rendered that impossible and they will appear later. We need hardly call attention to the Symposium on Syphilis appearing in this and the next issues. In addition to these the very best of the general papers will also be given to our readers.

A STATEMENT.

THE COLORADO MEDICAL JOURNAL presents the best work and thought of the physicians of this great western country. It presents more and better reports of the proceedings of our local medical societies than any other medical publication. It keeps its advertising pages clean and does not sell its scientific pages for any purpose at any price. It uses its utmost endeavors to make itself *the representative* medical publication of the Rocky Mountain region. To accomplish this result requires more than only the energy and whatever ability the editorial staff may be gifted with—it requires the hearty co-operation of the profession at large. The right to this it endeavors to earn.

This number of *THE JOURNAL* will reach a good many physicians not on our regular subscription list. To them we would suggest that this is a good time to begin giving their local medical journal the support and encouragement of their subscriptions and scientific contributions.

The Colorado State Medical Society Meeting.

The thirteenth annual meeting of the State Medical Society was held at the Brown Palace Hotel on June 19, 20 and 21st. The weather being clear and cool was conducive to a full attendance at all meetings.

FIRST DAY, TUESDAY, JUNE 19, 1900.

The Society was called to order at 9:30 on Tuesday Morning, June 19, President J. N. Hall of Denver, in the chair. Rev. W. A. Hunter, Ph. D., formerly of Toronto University, delivered the invocation. The President then opened the business part of the meeting. Inasmuch as the minutes of the last meeting had been published, they were not read.

Reports were made by W. J. Rothwell, Treasurer of the Society; S. D. Hopkins for the Executive Committee; H. B. Whitney, Chairman of the Publication Committee; H. G. Wetherill, Chairman on Committee on Place of Meeting; Wm. N. Beggs, Chairman of the Committee on Medical Societies. Dr. Henry Sewall reported that New Jersey and Ohio had agreed upon a mutual standard for the licensing of practitioners. Dr. Sewall also moved that the Society appoint a delegate to act with the Committee on National Legislation. This resolution was adopted.

Dr. Sol. G. Kahn, Chairman of Committee on Medical Ethics reported that there have been no infringements of medical ethics brought to the notice of

the Committee during the year.

Dr. Munn, moved that the Secretary of the Society be authorized to purchase a sufficient number of copies of the code for distribution to each member of the Society.

None of the chairmen of the other committees being present to make reports the Society proceeded with the scientific program.

Dr. W. A. Reed of Fowler presented a paper on "The Influence of Myth and Superstition in the Science of Medicine." Dr. W. C. Bane of Denver followed with a paper on "Early Correction and Educative Treatment of Convergent Strabismus." He also exhibited and explained the use of the Sideroscope, an instrument for the detection of iron or steel in the eye. The next papers read were "The Rational Treatment of Abortion in Country Practice," by J. W. Cline, M. D., of Georgetown; "Helps in Refraction," by Melville Black, M. D., of Denver; and "Headache, due to Eye Strain and its Treatment," by E. W. Stevens, M. D., of Denver.

The afternoon session began at 2 o'clock with a large attendance.

The Committee on Legislation, Dr. J. R. Robinson, Chairman, reported that as the legislature has not met since our appointment, nothing could be accomplished in the way of legislation. The sentiment of the profession was crystalized in the act passed by the

last legislature, which met with executive disapproval. It suggested that the Committee on Legislation appointed by the incoming president endeavor to procure the passage of the same or a similar act by the next legislature. It also recommended that the members of this Society enter into politics to the extent of securing pledges from the candidates for the next legislature. Concerted action by every member of this body during the coming campaign would do much to secure the passage of a law that would be satisfactory to the medical profession in this State, and that would give legitimate medicine, and the public a measure of protection not now enjoyed.

Dr. Stedman, said: "Mr. President. There are two gentlemen living in town to-day who are identified with the early history of this Society, both of whom have retired from active practice, both having been presidents of this Society. I refer to Dr. H. A. Lemen and Dr. W. R. Whitehead. I wish to move that these two gentlemen be withdrawn from the active list of our Society, and that we extend to them the honor of honorary membership, keeping them in touch with the Society and showing them the appreciation in which we hold them. I think both these gentlemen have good standing in the Society, in so far as having paid their dues and having conformed to the rules of the Society. The motion carried unanimously.

The first paper on the program was

then called for, "Dysmenorrhea, with report of Cases," by Dr. M. C. T. Love, of Denver.

The next paper was read by Dr. A. L. Bennett, of Denver, whose subject was "Some Medical and Surgical Experiences in Equatorial Africa."

Dr. Chas. Denison read a paper on, "Degenerative Results of Defective Heredity." Discussed by Drs. A. Stedman, J. N. Hall, and W. P. Munn.

Dr. C. D. Spivak read a paper on "The Diagnostic and Therapeutic Value of Insufflation of the Œsophagus and Stomach."

Dr. C. B. Van Zant, read a paper on the "Digestive Disturbances of Pulmonary Tuberculosis: Their causes and importance."

Dr. Clinton G. Hickey, read a paper on, "Some Pathological Conditions Characterized by Yeast Fungus," discussed by Drs. W. C. Mitchell of Denver, and Frank Finney of La Junta.

Dr. Alfred Mann, read a paper on "The Treatment of Tuberculosis with Cinnamic Acid." Discussed by Dr. Denison.

Dr. A. M. Holmes paper on "Report on Clinical Laboratory" and a report on the pathological exhibit at the recent meeting of the A. M. A. were read.

The Society then adjourned until 9 a. m.

SECOND DAY, WEDNESDAY, JULY 20, 1900.

The first paper presented was that of Dr. R. F. Graham of Greeley on, "Diabetes Mellitus," with report of cases.

It was announced that an enterprising

photographer had requested permission to photograph the Society on the west side of the hotel, with the understanding that if any of the members desired a copy they could obtain it from him. The request did not meet with approval and was refused.

Dr. Jesse Hawes, of Greeley, then presented his paper on "Guaiacol in Frequent, Painful Urination," which was discussed by Drs. W. B. Davis of Pueblo, and W. P. Munn.

Dr. Henry Sewall, of Denver, submitted a paper on, "Preliminary Note on the Relation of the Form of the Tubercle Bacillus." Discussed by Drs. W. C. Mitchell, E. C. Hill and Wm. N. Beggs.

Two members of the Committee on Admission being absent, Drs. John Law of Leadville and J. W. Cline of Georgetown, were unanimously elected to fill their places.

Dr. Powers reported for the Committee on the Pathological Laboratory as follows: The Committee on the Establishment of a Laboratory consisted of Dr. Jayne, Dr. Freeman, Dr. Jackson, and Dr. Fenn of Colorado Springs. Dr. Jayne has been out of town; Dr. Fenn has not been up here from the Springs, and the present report was adopted by Drs. Freeman, Jackson and myself, and is as follows: The Committee authorized at your last meeting to inquire into the matter of a Central Laboratory of Pathology in Denver, begs leave to make the following report:

"A very considerable number of

physicians have been conferred with regarding this matter and in an unofficial way representatives of the Denver College of Medicine and of the Gross Medical College have been consulted.

Such a plan as that proposed last year obviously has advantages and disadvantages. On the former side it may be said that with a well established laboratory of pathology in Denver there would be tremendous increase in the amount of pathological work done in the city and in the state, and it would doubtless permit this work to be accomplished in a more exhaustive and thorough way.

We all feel greatly indebted to the self-sacrificing work of those gentlemen who have during the past few years contributed so much to our laboratory resources, and we can hardly fail to recognize that laboratory workers should receive definite salaries; one, at least, should be so well paid as to enable him to devote all of his time to this work without thought of engaging in the practice of medicine. The establishment of a pathological and bacteriological laboratory would undoubtedly serve as a forceful stimulus to our clinical workers, and your reporter is very much impressed by this thought after recent examination of laboratory methods in eastern cities and after personal conversation with Councilman of Boston, Prudden of New York, and other eminent men in this field of work.

That there are certain objections to

the establishment of such a laboratory as that proposed cannot be denied.

(1) It would take a certain amount of income from the purses of worthy and competent gentlemen now working individually in the field.

(2) Should each of the two medical schools in Denver send its students for instruction to this laboratory, the school would, to a very great degree, lose definite control over its students in this special department.

(3) The expense attending this laboratory would be considerable. I have estimated that it could not be maintained for a sum less than \$3,000 to \$4,000 per year. This would allow a salary of \$2,000 to the director and \$2,000 more for assistance and general maintenance.

Your committee is of the firm belief that a laboratory cannot be established and conducted without the willing co-operation of both of our Denver Medical Colleges. It does not seem to your committee that this co-operation can be obtained at present."

The report was received and placed on file.

Dr. Powers: Mr. President — The Medical Society of the State of Colorado is composed of active and honorary members. We have an active membership of three hundred and twenty-six. Our honorary membership is limited to seven, and of these but one, Dr. D. H. Dougan, is a resident of our State. Three expresidents of our Society, each of whom has re-

tired from the practice of medicine, are on the active list list. These are Dr. W. F. McClelland, who joined the Society in 1871, Dr. W. R. Whitehead, who became a member in 1873, and Dr. H. A. Lemen, who united with it in 1874. All these are distinguished men in the medical annals of our state and it seems right and fitting that each should be transferred from the active to the honorary list.

Dr. Sewall moved that the name of Dr. Bancroft be also placed on the list honorary members.

The motions were seconded and unanimously carried.

Dr. H. C. Call, of Greeley, Chairman of the Committee on Sanitation and Preventive Medicine then submitted his report, in part as follows:

Mr. President and Fellow Physicians:

First we wish to commend the Colorado State Board of Health for the past year, especially for its action toward the dissemination of knowledge about tuberculosis, tuberculous cattle and danger from infected milk, etc.

Although they have done much, yet very much more remains to be done toward the prevention of this one dread disease which makes up from ten to fourteen per cent. of our death roll.

Any legislation without public approval and the enforcement of public opinion always has been, and will be for some time to come, at least, dead letter laws. Consequently many legislative acts which would meet our approval, have to be held in abeyance un-

til the time when the people will realize the danger of infection from its various sources, and insist that something be done to put a stop to its spread, such as putting consumptives apart by themselves. Keeping everything disinfected that comes in contact with them; seeing that tuberculous subjects expectorating on streets, in cars, etc.; meet with a punishment at least in proportion to the danger; that all infected cattle be either condemned or isolated; that a person selling milk from dangerous cattle be properly punished; and many more which will be needed before we can be said to have this one preventable disease even under the semblance of control.

To obtain the best results of Preventive Medicine it is necessary to raise to the highest standard possible and to educate to the greatest degree, the public as a whole. To a certain extent and among a certain few this is an easy matter, but for the people whose ignorance and prejudice have to be overcome, all physicians recognize the difficulty.

The relation of the physician to the ninety per cent. of the disorders of infancy and childhood, may be summed up in the one word "Hygiene." In order to reduce this per centage the question of educating the coming generation is our greatest stronghold. The easiest and probably best way to do this is through our public schools, which have been in the past, the largest factor as a means of spreading contagi-

ous diseases throughout a community. In fact, as has been said, public schools may be called a great juvenile board of trade, where exchange of infections and their products may be effected and contagion disseminated.

To change this and make the public school a health giving as well as an educational institution, Boston, five years ago, Chicago, and some other cities, during the past year have undertaken a plan of medical inspection. Appointing able and competent men, acting as agents for the Board of Health, to daily visit their schools, inspect all children not feeling well, and when desirable for the child's good or the welfare of others, send the little one home to its own physician.

This inspection, wherever it has been tried, has given general satisfaction, but the one main factor, which from a hygienic point of view is more important than this statistical showing, is the results for the future,—namely the education of the coming generation to look after their own and children's health."

The Society then proceeded with the nomination of a Nominating Committee. Ballots being taken and counted, Drs. Finney, Sewall, Tyler, Hawes and Kahn were declared elected.

Dr. C. K. Mills of Philadelphia delivered an address on "Some Medico-Legal Experiences and Reflections."

Dr. Eskridge moved that a vote of thanks be given by this Society to Dr. Mills for the able address with which

he had favored them. The vote was unanimous.

The program for the afternoon session was a "Symposium on Syphilis."

"Modes of Infection," by Dr. E. P. Hershey.

"Problems in Diagnosis of Initial Lesion," by Dr. W. B. Davis.

"Bacteriologic Theories and Possibilities," by Dr. W. C. Mitchell.

"Cutaneous Manifestations," by Dr. J. M. Blaine.

Tertiary Manifestations:

(a) "The Brain," by Dr. J. T. Eskridge.

(b) "The Eye," by Dr. Edward Jackson.

(c) "The Ear," by Dr. P. F. Gildea.

(d) "The Nose," by Dr. R. Levy.

(e) "The Throat," by Dr. F. P. Galaher.

(f) "Bones and Joints," by Dr. W. W. Grant.

(g) "Lungs, Heart and Vessels," by Dr. H. B. Whitney.

(h) "Abdominal Viscera," by Dr. H. Sewall.

(i) "Inherited Syphilis," by Dr. Sol. G. Kahn.

(j) "Is Syphilis Ever Actually Cured," by Dr. Frank Finney.

(k) "Prophylaxis," by Dr. E. Stuver.

(l) "Influence of Syphilis on Trauma," by Dr. Leonard Freeman.

(m) "Syphilis in the Armies of the World," by Col. H. Lippincott, Surg. U. S. A.

(n) Treatment by Dr. W. P. Munn.

The evening session was called to order by the President.

Dr. W. P. Munn, of Denver submitted a paper on "State Medicine," which was greatly appreciated.

Dr. Wetherill moved that the Society extend a vote of thanks to Dr. Munn for his excellent address and that 5,000 reprints be made, from the transactions of the Society, for distribution under his direction.

The convention then adjourned until 9 o'clock a. m.

THIRD DAY, THURSDAY, JUNE 21, 1900.

The first paper for the day was by Dr. W. T. Little, of Canon City, on "The Symptoms, Prognosis and Treatment of Gastric Ulcer."

This was followed by papers by Dr. H. T. Pershing on "Localization of Bullet Wound of Spinal Cord and Removal of Bullet from the Spinal Cord," and Dr. F. H. McNaught, of Denver, on "Report of Treatment of Fractured Patellæ by Operative Measures." The paper of Dr. H. W. McLaughlin on "Immunization for Typhoid Fever" was also read.

Dr. Tyler announced that inasmuch as several members of the Society had inquired for copies of the circular on Tuberculosis, issued by the State Board of Health, he had provided a number of copies, which could be obtained upon application.

Dr. Spivak moved that the Society appoint a Committee on the History of Medicine in Colorado. Carried.

Dr. E. J. A. Rogers next submitted a paper on "Report of Surgical Cases."

The President announced that he

took great pleasure in introducing Dr. Charles B. Nancrede, of Ann Arbor, Mich. Dr. Nancrede then delivered an address on "Surgery."

Dr. Powers moved that a vote of thanks be tendered to Dr. Nancrede for his interesting address, and also moved that the names of Dr. Nancrede and Dr. Mills be placed on the honorary list of the society. Both motions were seconded and unanimously carried.

The papers of Dr. F. E. Waxham on "Pulmonary Embolism, with Report of Case;" Dr. G. E. Tyler on "The Relation of State and Local Boards of Health to Diphtheria Outbreaks," and Dr. C. B. Lyman on "Fracture of the Humerus, Complicated with Dislocation of the Shoulder Joint, with Report of Cases," were then submitted.

The first paper for the afternoon was submitted by Dr. H. B. Whitney on "The Conservative Treatment of Appendicitis," which was followed by a paper on "Appendicitis; when to operate," by Dr. J. B. Perkins.

The President's address, on "The Diseases of the Bronchial Glands," was then delivered.

It was carried by a unanimous vote that honorary membership be conferred upon Dr. Lippincott of the United States Army.

The Committee on Admissions submitted and recommended for membership in the Colorado State Medical Society the following-named applicants:

Dr. G. E. Alexander, Castle Rock;

" J. H. Cole, Leadville;

" C. R. Hally, Fort Collins;

" Smith McMullin, Castle Rock;

" Marion Burke, Colo. Springs;

" H. W. Wilcox, Silver Plume;

" B. I. Johnson, Denver;

" Geo. Atcheson, Idaho Springs;

" J. A. Wilder, Denver;

" Elsie R. Mitchel, Denver;

" Mary E. Bates, Denver;

" W. H. Riley, Boulder;

The candidates for membership were then balloted for and declared elected.

Dr. Frank Finney: Your Committee on Nominations begs leave to make the following report of names for the various offices. I will state that it has been customary for the Committee on Nominations to present the names of three members for president, three for vice-president and two for recording secretary, assistant secretary, treasurer and a full board of trustees and committee on admission.

The committee presents the following names: Drs. Rivers, Munn and McLauthlin. I am authorized to state for the gentleman who proposed Dr. Rivers' name that Dr. Rivers positively refuses to permit himself to be nominated for president of the society.

The President: You have the list before you, the candidates for president being Drs. Munn and McLauthlin.

Dr. McLauthlin: No one, Mr. President, can receive the nomination to the office of president without feeling honored and gratified. I ask that the secretary be requested to cast the vote of the Society for Dr. Munn, and that I

be permitted to withdraw my name from the nomination. (Great applause.)

The motion of Dr. McLaughlin being seconded, was unanimously carried.

The secretary announced that Dr. Munn, of Denver, would be the next president of the Society.

The President: I will ask Drs. McLaughlin and Hawkins to escort Dr. Munn to the platform.

Dr. Munn then made the following little speech:

"I think there are few things in any man's life that he esteems more highly or values more than an expression of the affection and regard of his colleagues in his own profession. If this election comes as a mark of esteem I shall honor it, and it shall be my aim to endeavor to deserve that expression of confidence which you have just given me. I thank you, ladies and gentlemen, for the courtesy and honor you have shown to me." (Great applause.)

Dr. Graham was elected first vice president; Dr. Little, of Canon City, second vice-president, and Dr. Dow, of La Junta, third vice-president.

Dr. Whitney was unanimously elected secretary, with Dr. Minnie T. Love as recording secretary, Dr. Kirkland, of Fort Collins, being elected assistant recording secretary.

The board of trustees were elected:

Dr. J. T. Eskridge, Denver;

" A. Stedman, Denver;

" W. E. Wilson, Denver;

" S. E. Solly, Colorado Springs;

" E. J. A. Rogers, Denver;

" H. Work, Pueblo;

" J. N. Hall, Denver;

Committee on Admissions:

Dr. S. G. Kahn, Leadville;

" C. K. Fleming, Denver;

" C. A. Powers, Denver;

" D. F. Dayton, Trinidad.

The Society expressed its appreciation of Dr. Hall's work while president by voting him a unanimous vote of thanks. There being no further business the Society adjourned.

The Convention was closed by an informal dance given at the Brown Palace Hotel, in the ball room, on Thursday evening, June 21st, Dr. and Mrs. Munn and Dr. and Mrs. J. N. Hall composing the receiving committee. The affair was in every way a distinct success, reflecting great credit on the committee of arrangements. Conspicuous among the ladies for their gowns were Mrs. Henry Sewall, Mrs. Munn, Mrs. Hall, Mrs. Hershey, and many visitors.

Drs. Grant and Hilliard were hosts to a bevy of Blue Grass belles, who proved most attractive to the bachelor contingent.

The dance was followed by a supper, after which the company dispersed.

THE SMOKER,

A smoker was given by the Entertainment Committee of the State Medical Society at the Colorado Athletic Club, Tuesday, June 19. Many of the members of the profession and their friends attended. The evening was spent most enjoyably, and passed with

great credit to the committee. While some of those present failed to enjoy the program, this was probably due to the fact that they did not understand the latest rulings of his lordship, the Marquis of Queensberry.

EXHIBIT ROOM.

The Exhibit at the State Medical Society was held in the Club Room of the Brown Palace, under the direction of the Executive Committee.

The most prominent features of the Exhibit were the displays of chemical apparatus, by Dr. Hillkowitz; bacteriological specimens, by Dr. Mitchell; skiagraphs, by Dr. Stover, and an elaborate collection of slides and photographs, by Dr. A. H. Holmes. Mrs. Lewis, who was in charge of Dr. Holmes' exhibit, cheerfully arranged various slides of stained blood under the microscope, so that all who desired had an ample opportunity to study them.

Major Moseley had charge of the Denver Chemical Company's exhibit, and distributed gratuitously antiphlogistine, extolling the virtues of this new remedy. To Major Moseley is due the credit of having looked after the Register.

Mr. Lauth superintended his exhibit of surgical instruments and instrument cases. That this exhibit was of great interest to the visitor was evidenced by the many questions asked of Mr. Lauth about the newer surgical devices.

The Colorado Kephir Company had an exhibit under the charge of Mrs. Spec-Torski. The methods of making Kephir and its usefulness were thoroughly explained, samples of the freshly-made Kephir being given.

C. H. Howe had an exhibit of his well-made tablets and elixirs. The highly recommended cordial of this firm was duly sampled by all the visitors, and many complimented on it as an extremely agreeable preparation.

The other exhibits were those of John Wyeth & Co. and "Eskay's" Albuminoid Food, each physician receiving a sample.

The Durbin Instrument Company of Denver had an elaborate display of instruments and surgical accessories.

Last but not least was THE JOURNAL's stand. Here the recent editions were distributed to all who were not subscribers. Those physicians who had been somewhat lax about their medical literature recognized that in the field of medical publications THE JOURNAL was pre-eminently ahead of all others, and duly subscribed.

It is safe to say that if at any time the medical profession were skeptical as the progressive stand of THE JOURNAL they were forced to concede that it contained the news of each month which is of essential value to the practitioner of medicine.

The Exhibit was typical of those men who promoted the affair, and was thoroughly up to date.

NEWS ITEMS.

ADDITION TO ST. ANTHONY'S.

The Sisters of St. Francis are building a \$20,000 addition to St. Anthony's Hospital in Denver. The new wing will conform to the present building and be erected 80 feet east of the old structure. The addition will be 42 feet 6 inches wide and 115 feet deep. Connecting the two buildings will be a two-story sun porch. Extending from the center of this porch will be a porte cochere where ambulances and carriages can drive in to discharge patients. The addition will contain a large operating room completely equipped and is intended to be superior to any operating room in the West. It is modeled after that in one of the leading hospitals in Philadelphia, which is supposed to be without an equal. The old operating room will be kept intact, as the need for more room of this kind is a partial reason for the construction of the addition. On the same floor with the operating room will be apartments for the chaplain and other special rooms. On the second floor will be the chapel and living rooms for the sisters. The rooms in the old building where the present chapel is will be remodeled into private rooms for patients. The sisters will ultimately build still another wing to the hospital, the completed plans including a structure with three

wings, of which the one now under construction will be the center.

HOSPITAL MAY LOSE LEGACY.

St. Joseph's Hospital has been made defendant in two suits filed in the District Court, in which the hospital is threatened with the loss of about \$2,800 from the estate of Mrs. Eliza Garner, of which it had been made by will the residuary legatee.

In the complaints Mary C. Schwartz and Gertrude Schwartz, sisters of Eliza Garner, aver that Mrs. Garner, in her lifetime, had been the trustee for them of a two-thirds interest in a certain \$3,000 mortgage by Joseph Guerdet to the St. Vincent de Paul Society of Syracuse, N. Y., the mortgage being left at his death to the three sisters, with Mrs. Garner in charge of the fund. It is claimed that she reinvested the money and had left matters in such a condition that the \$2,000 possessed by her in trust seemed part of her estate. All of this with the exception of \$800 was bequeathed to St. Joseph's Hospital at the decease of Mrs. Garner in January, 1899, and the estate was inventoried at \$6,402.63.

Margaret G. O'Connor was appointed executrix and is formally sued. A judgment for \$2,800 is demanded and

an injunction against the executrix so that she shall not partition the estate until the lawsuits have been determined.

RIO GRANDE HOSPITAL DEAL.

Material and radical changes in the management of the Denver and Rio Grande Hospital, at Salida, are imminent. The institution has been and is now supported by an annual assessment of \$6 on each employe of the road, but has been practically managed by the chief surgeon of the railroad company. Errors in management are alleged to have crept in, and the employes at the recent meeting of the Denver and Rio Grande Railroad Employes' Relief Association, at Salida, revised the constitution of that organization and decided to assume full control of the hospital. The new constitution provides for a board of fifteen directors, twelve of whom are to be elected by the employes. Each department of the railroad will have one representative from each division. In addition to these the general manager, general superintendent and superintendent of machinery will be members of the board. One member from each division and one official will compose the executive board and the treasurer of the railroad company will continue to be the treasurer of the association. The board of directors will annually elect a chief surgeon, whose headquarters will be at Salida. He may be chief surgeon of the road ex-officio. The new constitu-

tion will come before the trustees at their July meeting and it is believed it will be adopted. A number of personal changes in the management of the hospital will follow the adoption of the new constitution.

MONEY FOR JEWISH HOSPITAL.

Alfred Muller has received a subscription of \$5,000 from Samuel Grabfelder, of Louisville, toward the new wing of the National Jewish Hospital of this city. Mr. Grabfelder is president of the board of management of the hospital, and when the plan of the new wing was first suggested he promised material aid. The board has now \$10,000 subscribed toward the wing. It will take \$30,000 to construct it, and the board will not begin to build until the money is all in hand.

The board confidently expects, nevertheless, to begin to build in the fall.

SURGICAL CASE WITHOUT A PARALLEL.

The following from the *Rocky Mountain News* is simply given as a case of newspaper medical lore:

"A case which has but one parallel in the surgical annals of the United States resulted in the death, at 745 Lincoln, of Chester Deforest Southworth, son of Rev. Edward Southworth, chaplain of the House of Representatives during the last Legislature. Deceased was 29 years of age. His death was caused by a ligament which formed in-

side the body and which drew tightly under the stomach across the upper part of the intestines. The ligament bound the stomach so that no food could pass through, but was forced back and thrown out through the mouth. Mr. Southworth was treated for several kinds of stomach trouble and only returned two weeks ago from the East, where he had gone to consult specialists on stomach troubles. The condition which resulted in his death had only manifested itself since April."

The *Medical Mirror*, of St. Louis, offers \$1,000 in prizes, for theses on tuberculosis, to be distributed as follows: \$500, \$200, \$100, and four prizes of \$50 each. The following prominent gentlemen have accepted appointment on the committee on awards: Dr. William Osler, Baltimore, Md.; Dr. George F. Butler, Chicago, Ill.; Dr. A. R. Kiefer, St. Louis, Mo.; Dr. C. Lester Hall, Kansas City, Mo.; Dr. B. R. Hall, St. Louis, Mo.; Dr. Lewis E. Lemen, Denver, Colo.; Dr. Joseph M. Matthews, Louisville, Ky.; Dr. W. W. Grant, Denver, Colo.; Dr. Thomas Hunt Stucky, Louisville, Ky.; Dr. Hugo Summa, St. Louis, Mo.; Dr. Walter Wyman, Washington, D. C. Entries close October 1, 1900, and the award is made January 1, 1901, giving the contestants three months in which to prepare their papers and to include clinical reports. The points for consideration in each paper with a percentage attached will be as follows:

General considerations of the subject, 10; pathology, bacteriology and diagnosis, 20; clinical reports, 20; prognosis and treatment, 35; conclusions, with resume, 15. It is hoped to develop from this discussion the fact that much more can be done for our tubercular patients than the average practitioner believes, and the aim is to elicit all facts that may be of value in the treatment of this disease.

Dr. Alexander G. Skene, of Brooklyn, N. Y., died at his summer home, Highmount, Catskills, July 4, of heart disease, to which he had been subject for years. In 1883 he became known the world over by the publication of a book on gynecology. In 1887 a supplementary work was printed. The University of Aberdeen, Scotland, conferred upon Dr. Skene the title of LL. D. The doctor was to open, in the fall, on President street, Brooklyn, the Skene hospital for self-supporting women. All care was to be given free, and the great specialist himself was to superintend the work. It is probable the friends of Dr. Skene will carry the project to completion.

Fashions are not limited to wearing apparel. Society literature rigidly follows set lines, but the paths have broadened so as to include medical literature. Each medical school has an exclusive publication setting forth the work done by its alumni. While some-

what late in the year, the Omaha Medical School has issued the first number of *The Omaha Medical College Pulse*. The outlook for this little magazine should be good. It is well edited and contains well selected articles.

It is reported that as the result of the high temperature the Society for the Prevention of Cruelty to Animals in New York City treated 260 cats and dogs for sunstroke July 18. Oh, most worthy charity!

Perkins and Yerby, who conduct the Comet dairy, were fined \$10 and costs by the police judge, June 26, for selling milk not up to the required standard. Their defense was that their employes got tired milking and filled up the partially filled buckets with water. The judge thought that was "too thin," and assessed the punishment indicated.

We acknowledge with pleasure the receipt for the second time of a number of copies of the picture "Faith," issued by the Antikamnia Chemical Co. It is a very general favorite, and the copies are carried away by secret admirers about as rapidly as we put them up in the office.

We have been favored with a copy of "How to See Paris," a very compact guide to Paris and the Exposition. The Banning O. & M. T. Co. of Fort

Wayne, Ind., will be pleased to send a copy free to any physician desiring it.

STATE DENTISTS' ASSOCIATION OFFICERS.

The following officers were elected at the Colorado State Dental Association meeting at Boulder, June 14th:

President, E. R. Warner, Denver; vice president, J. A. Smith, Colorado Springs; secretary, H. F. Hoffman, Denver; treasurer, William Smedley, Denver; representatives to the National Dental Association at Old Point Comfort, Va., on July 10, and to the international convention at Paris were also selected.

Dr. Carlin, recognizing the necessity of suppressing the outbreak of small-pox in the negro quarter of Denver, has appointed extra physicians as health inspectors. No effort will be spared to stamp out this epidemic; every negro will be compelled to submit to vaccination; every suspect and infected residence will be severely quarantined. The methods pursued by inspectors will be essentially the same as the plan followed by the Marine Hospital Service.

Mailing outfit for Diphtheria Cultures devised by the Colorado State Board of Health:

1. A test tube 5 inches long holding

2 drachms; in this tube is the usual swab.

2. A cylindrical tin box $1\frac{1}{8} \times 5\frac{1}{2}$ inches, with sliding cover. The test tube is placed in this box, being evenly

surrounded by absorbent cotton.

3. An outside case of wood or metal, with screw cover and washer, this box being of such dimensions as to snugly receive the tin box.

COMMUNICATIONS.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

To the Fellows of The American Electro-Therapeutic Association:

The Tenth Annual Meeting of the American Electro-Therapeutic Association will be of unusual interest. It will be held on September 25, 26 and 27, 1900, at the Academy of Medicine, in New York City. The headquarters will be one block from the Academy, at the Hotel Bristol, corner of Fifth avenue and 42d street. The chairman of the committee of arrangement is Robert Newman, M. D., 148 West 73d street, New York City. The committee has made preliminary arrangements for the meeting for scientific and social pleasures, so that the members will be in continuous attendance from early in the morning until midnight, varying social pleasures with scientific matters. Many surprises are in contemplation and some have been positively arranged, as visits to the greatest electric enterprises in the world. All success is positively secured and assured. At this early date so many scientific papers

have been announced that the members are earnestly requested to send in the titles of their intended papers at once to the chairman of the committee of arrangement, or to the secretary, as from present indications there will be more papers offered than the time will allow to be heard, and the earlier announcements must necessarily have the preference.

The attention of the members is also directed to the two discussions on the program:

(1) Electricity in Gynecology and the present reluctance of Gynecologists to use electricity.

(2) Electricity in Tuberculosis and the present modes of treatment.

Members who wish to participate in these discussions will please communicate with the president as early as possible.

Ladies are expected to be present in large numbers, and will be entertained in sight-seeing by an extra ladies' committee, for which four routes are particularly prepared, including museums, libraries, churches, drives, Central Park,

Aquarium, Stock Exchange, etc.

In contemplation are visits to electric laboratories, the mysteries of the telephone central with all the latest appliances, the headquarters of the Automobile company, the largest electric power-house in the world, Grant's tomb, hospitals, etc., to some of which invitations have already been received.

The committee of arrangements can positively promise a prosperous meeting and an enjoyable time, and feel much encouraged by the kind support of the editors of medical and electrical journals, the general electricians, electric corporations and the general public: Your interest is solicited and earliest communication to the officers in charge of the annual meeting, according to their respective office, as follows:

WALTER H. WHITE, M. D., Pres't,
220 Marlborough st., Boston, Mass.
ROBERT NEWMAN, M. D.,
Chairman Com. on Arrangement,
148 W. 73d st., New York City.
GEO. E. BILL, M. D., Secretary,
255 North st., Harrisburg, Pa.

PAN-AMERICAN EXPOSITION.

Editor Colorado Medical Journal, Denver, Colo.:

BUFFALO, N.Y., JULY 3, 1900.

DEAR SIR—The Pan-American Exposition has seen fit to entrust the care of the department of Ethnology and Archæology to a practicing physician. I should be very glad if you would allow me to reach your readers with

the following request for assistance.

Many members of the medical profession are interested in the study of American Ethnology and Archæology and not a few have valuable collections of Indian relics and skeletons from Indian graves. Those not directly interested in this study are so circumstanced as to be aware of the hobbies of their neighbors and could doubtless furnish the address of collectors. I should be greatly obliged for information and for the loan of collections for the use of this department of the Exposition. Exhibits which represent study in some special line of American Ethnology and Archæology will be particularly suitable.

Very truly yours,

A. L. BENEDICT, M. D.,
Supt. of Ethnology and Archæology.

THE INDIA FAME.

We have been requested to give the following space in our columns and gladly comply:

GOVERNOR'S PROCLAMATION

DENVER COLO., June 27, 1900.

To the People of the State of Colorado:

The effort to secure funds for the relief of the famine stricken people of India undertaken by the Indian Relief Commission should receive the cordial support of our people. No appeal to charity was ever more urgent. The calamity which has overtaken that country has scarcely a parallel in the past. The number of those who are

destitute and starving equals the population of the American Union, and the consequent mortality surpasses belief. While we are not responsible for the unhappy condition of this unfortunate people, nevertheless the duty which we owe to common humanity requires us to give our bounty for their relief. All other states in the Union are responding to the appeals of the Commission. We should give and give quickly if we would save many lives and aid in terminating the terrible calamity. Mr. A. D. Weir, of Omaha, has been designated by the Rev. G. L. Hosford, of Lincoln, Neb., special commissioner in Colorado, and F. B. Gibson, vice-president of the International Trust company of Denver, Colo., has been designated as treasurer for the Commission in Colorado to whom all contributions should be sent. I bespeak for this commission the earnest consideration and support of all our people.

Sincerely yours,
C. S. THOMAS, *Governor.*

This Commission is working with the New York Christian Herald, through whose hands all monies are sent directly to an interdenominational committee of American missionaries in Bombay, composed of the following representative missionaries:

Rev. Edgar M. Wilson, Presbyterian Mission, Qatnagiri.

Rev. G. N. Thomssen, Baptist Mission, Bapatla.

Rev. Edwin F. Frease, Methodist Episcopal Mission, Baroda.

Rev. J. H. Harpster, Lutheran Mission, Gunter.

Rev. M. D. Adams, Church of the Disciples Mission, Bilasper.

Rev. M. B. Fuller, Alliance Mission, Girgaon.

Rev. E. S. Hume, Missionary of the A. B. C. F. M., at Byculla, Bombay, Sec.

Bishop J. M. Thoburn, Chairman of the Committee, is in the United States on sick leave.

All aid is properly distributed to the starving by the missionaries themselves. The Christian Herald last month sent from our American citizens a cargo of 200,000 bushels of corn to these sufferers. Our government paid the transportation on the boat, which amounted to \$45,000. In addition to this the Herald has cabled over \$175,000 in money to the committee for immediate relief. Nebraska sent \$15,000 while Kansas gave nearly \$25,000 to this fund. The states all around us are responding nobly to the call. So will Colorado. It is the individual citizen that saves the multitudes.

This famine is now at its worst and must continue until late in October. What we do let us do quickly.

HOW MANY LIVES WILL YOU SAVE?

Two cents a day will support one life.

One dollar will save a life for two months.

Two dollars will save a life until the harvest.

Five dollars will save a man, wife and child until the next crop is gathered.

Ten dollars will save a whole family from death.

Twenty dollars will save ten lives for four months.

Twenty-Five dollars will save them and afford them the comfort of blankets during the rainy and cold season.

Fifty dollars would save five families.

One Hundred dollars would save a small community.

Address all remittances for the relief of Starving India to
THE COL. INDIA FAMINE RELIEF FUND.

MR. F. B. GIBSON, *Treasurer,*
Vice-President International Trust Co.,
Denver, Colo.

Address all communications to A. D. Weir, State Commissioner, Col. India Famine Relief, Denver, Colo., Cr. Y. M. C. A.

LEPROSY IN IDAHO.

The following dispatch from Boise, Idaho, is taken from the *Rocky Mountain News*:

"It is reported here that four of the

Idaho boys who went to the Philippines contracted leprosy and are now isolated. One of them lives at Wood River. It has been impossible to obtain the names. In the case of the Wood River boy, who is said to be the son of an Episcopal clergyman, physicians' opinions are unqualified that he has the loathsome disease. He is isolated far back in the mountains. It is understood an official investigation will be made."

DEFINITION OF A HOMEOPATHIC PHYSICIAN.

At the recent meeting of the American Institute of Homeopathy held at Washington, D. C., the following definition of a homeopathic physician was adopted:

"A homeopathic physician is one who adds to his general knowledge of medicine a special knowledge of homeopathic therapeutics and observes the law of similia. All that pertains to medicine is his tradition, by inheritance and by right."

Now, what is homeopathic therapeutics, and who practices genuine, *bona fide*, simon-pure homeopathy?

BOOK REVIEWS.

MINOR SURGERY AND BANDAGING, including treatment of Fractures and Dislocations, the Ligation of Arteries, Amputations, Excisions and Resections, Intestinal Anastomosis, Operations upon Nerves and Tendons, Tracheotomy, Intubation of the Larynx, etc. By Henry R. Wharton,

M. D., Demonstrator of Surgery in the University of Pennsylvania, etc. Fourth edition; thoroughly revised and enlarged; with 502 illustrations. Lea Brothers & Co., Philadelphia and New York.

This manual has now reached its

fourth edition, having been revised and enlarged, to meet the increasing demands of the medical public for extra plates and descriptive texts. The volume is such that it earnestly recommends itself to the student and practitioner, embodying, as it does, the entire technique of bandaging and surgical dressings. The plates and drawings fully illustrate the views of the author, and in themselves form the basis of instruction in surgery so commonly overlooked by the student.

The chapters on operative surgery, while brief, still give an adequate idea of the subject, and should prove a ready aid to the practitioner for reference.

A MANUAL OF OBSTETRICS, by A. F. A. King, A. M., M. D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, D. C., and in the University of Vermont, etc. Eighth edition; revised and enlarged; with 264 illustrations. Lea Brothers & Co., Philadelphia and New York. 1900.

The eighth edition of this popular handbook on Obstetrics has received a welcome approval from the profession. It is difficult to praise or criticize any work such as this, when its standing as a text is unquestioned. The revision has permitted an elaborate treatment of the puerperal stage, which is of most interest to practitioners. The pages devoted to the mechanism of

delivery embody the recent views of the recognized teachers of obstetrics.

To the physician who enjoys a general practice this volume should be invaluable; also to the specialist who often desires a ready reference work.

THE MODERN TREATMENT OF WOUNDS, by John E. Summers, Jr., M. D., Surgeon in Chief to the Clarkson Memorial Hospital; Attending Surgeon, Douglas County Hospital; formerly Professor of the Principles and Practice of Surgery and Clinical Surgery, Omaha Medical College; Ex-President of the Western Surgical and Gynecological Association, the Nebraska State Medical Society and the Omaha Medical Society. Medical Publishing Co., Omaha., Publishers, Omaha, 1899. (Price \$1.50.)

This little volume reviews the modern treatment of wounds in a clear, concise manner, indexing each injury in its proper classification. While the author has attempted to cover a very large field, he has not made the error of avoiding the necessary detail of his subject, as it is boiled down, giving a good substance, which suggests to the reader to pursue a collateral reading if he desires to possess a more extensive knowledge. In its own department Dr. Summers' volume has the distinction of reciting the approved treatment of wounds inflicted during the last Spanish war. If for no other reason this portion of the work should recommend itself to all those physicians engaged in acute and military surgery.

THE COLORADO MEDICAL JOURNAL

AND WESTERN MEDICAL AND SURGICAL GAZETTE.

A Scientific Medical Journal, Published in the Interest of the Profession of Colorado and Adjoining States. A Journal of Science, of News and of Medical Lore.

VOL. VI.

DENVER, COLORADO, AUGUST, 1900.

No. 8.

ORIGINAL COMMUNICATIONS.

Symposium on Syphilis.*

Concluded from the July Number.

Syphilis of Lungs Heart and Vessels.

BY H. B. WHITNEY, M. D., DENVER, COLO.

Pulmonary syphilis, of an extent sufficient to give rise to clinical phenomena, is certainly rare. It may present itself in three forms: First, the so-called white hepatization, a pneumonic process found chiefly, if not wholly, in still-born or very young subjects of hereditary syphilis. Then in older individuals syphilis may produce both chronic fibroid and chronic ulcerative processes, the latter especially resulting from gummatous infiltration and softening. The clinical picture in these cases resembles very closely that of chronic phthisis; there are no clearly distinctive or pathognomonic features. It is certainly important to remember the possibility of syphilis in every phthisical, and in certain cases to try an anti-syphilitic treatment. Suggestive features would be a plain specific history, the presence of tertiary lesions in other organs, the absence of tubercle bacilli from the sputum, and possibly the irregular or

atypical localization of the physical signs.

The heart also is seldom the seat of syphilitic invasion, and still less frequently in such a way as to be susceptible of clinical diagnosis. It may contain localized areas of interstitial myocarditis, or its walls may be occupied by one or more gummata. Either of these conditions may result in cardiac aneurism and possible rupture; or in a chronic endocarditis, which may in some cases affect the valves. It is possible, therefore, for either secondary or tertiary syphilis to give rise to the clinical symptoms of a chronic myocarditis, or to the souffles and other signs of valvular incompetency or stenosis. Here, again, as in the lungs, the specific nature of the affliction can only be surmised in certain cases where the individual is manifestly syphilitic.

Syphilis of the great vessels is of greater clinical interest because of its

*Given at the Colorado State Medical Society, June 20, 1900.

probable relation to the most serious form of aneurism. This relation is by no means universally admitted, but since the important investigations of Welch in 1876 it has come to be more and more regarded as an established fact. It may certainly be accepted as proven that syphilis does cause an endoarteritis, which in the smaller vessels tends to produce such a thickening of the intima as to result, sometimes in complete occlusion, sometimes again in yielding and dilatation. This is seen especially in the vessels of the brain, a vascular area for which the specific poison appears to have a remarkable predilection. There is, therefore, nothing impossible in the supposition that in certain other cases the aorta alone might be the organ selected for attack; here, also, the poison first affecting the smaller vessels, the vasa vasorum, as demonstrated in certain cases of atheroma by Hyppolyte Martin, and eventually producing an impaired nutrition and even partial necrosis of the corresponding aortic wall. In fifty-six fatal cases of syphilis Welch found that no less than 60 per cent. presented some degree of aortitis. There is, it is true, except in the very rare instances of a genuine gumma, nothing specific in the pathological appearances of a presumably syphilitic aortitis. It seems to differ in no way from the ordinary forms of senile atheroma. And yet there would seem to be some essential difference. Compare the symptoms of simple dilatation of the aorta, so frequently found, even in a partially saccular form, in atheromatous individuals, and those of genu-

ine aneurism. The one is comparatively harmless; the other is unequivocally malignant. It causes local paralysis, it obstructs respiration, it even makes its way through bony structures. Why this difference? Why do we so rarely encounter these virulent forms in aged laborers, in those especially with general arterio-sclerosis and cardiac hypertrophy, in women also, in whom the tendency to simple atheroma appears to be even greater than in men?

To explain these facts on the ground of simple differences in the degree of aortitis, in conjunction with higher arterial pressure, is unsatisfactory. One would almost affirm a belief that we must be dealing with a different kind of primary aortic lesion, and when we look about for some special etiological factor, some single poison capable of producing such a uniformly serious chain of consequences, it is only in syphilis that we find a wholly adequate cause. Aside from the well-known polymorphous character of syphilis and its tendency to produce, especially in later periods, not only specific but also multitudinous vulgar forms of inflammation, the following arguments speak strongly for the specific origin of most cases of thoracic aneurism:

- I. A common history of syphilitic infection. We have all seen isolated instances of this association; I recall two cases of aneurism, both in comparatively young subjects, in whom syphilis was unquestionable. But it is only large statistics, like those of Welch and Hampeln, for example, which are convincing. Welch, in 34 cases of aneurism, found undoubted syphilis in

17, and probable syphilis in an additional 8. Hampeln made a careful study of 50 cases which had come under his personal observation. In the 15 male cases which were from private practice, a history of syphilis was obtained in all but one; of 33 hospital cases there was no history at all in 13, and in the remaining 20 a specific history was given in 10. Such statistics cannot be explained by the general prevalence of syphilis. Nor is there any other infection or diathesis, like gout, palludism, alcohol, malaria, or the acute infectious diseases, which has any sort of constant relation to the development of true aneurism.

2. Aneurism is a disease largely of late middle life, chiefly the fifth or sixth decennia. Hampeln's 50 cases occurred, 1 in the third decennium, 6 in the fourth, 22 in the fifth, 15 in the sixth, and 3 in the seventh. This great frequency between 40 and 50 might be fairly well explained by a coincidence of beginning atheroma with heart strain. But this does not account for the rarity of aneurism in men over 55, many of whom are still hard workers; while the age of greatest frequency does accord fully

with the hypothesis that aneurism is a late tertiary lesion of syphilis. Hampeln even goes so far as to state that if 30 years has elapsed since the date of infection, thoracic aneurism may be excluded in making a differential diagnosis of a mediastinal tumor.

3. Aneurism is known to be ordinarily frequent among soldiers, who are admittedly prone to venereal infection, and among prostitutes.

4. Iodide of potassium has occasionally effected a remarkable improvement in aneurysmal cases.

Since, however, whatever may be said of the specific nature of the original aortitis, any aneurism, at the time of its discovery, has usually become a largely mechanical lesion, it is evident that in the great majority of cases an anti-syphilitic treatment can accomplish nothing. It is often worthy of trial, chiefly as potassium iodide, occasionally, perhaps, as mercurials. Hampeln thinks that the chief lesson of the specific origin of aneurism should be a still more thorough and prolonged treatment of the primary affliction in its early stage.

Treatment of Syphilis.

By WM. P. MUNN, M. D., DENVER, COLO.

The modern treatment of syphilis must take account both of the patient and the disease. We base our therapeutic measures upon certain definite ideas of the pathology of the disease process, combined with a definite esti-

mate of the personal idiosyncrasy of the patient to the drugs or other remedies that it is found necessary to apply.

When a patient presents himself with a recently manifest initial lesion, there are some circumstances that justify re-

sort to surgical measures in the attempt to abort the disease. Such efforts are not as a rule successful; indeed, there are not wanting authorities who deny the credibility of all reported cases of aborted syphilis by excision of the initial lesion. Nevertheless in a small proportion of instances capable observers have excised what has seemed to be a typical initial lesion and there has been no development of constitutional symptoms. An indurated chancre that has not been present more than twenty-four hours upon a long prepuce is probably the best situated for complete and free removal, circumcision being the preferable operation. In one such instance a sore that seemed typical and which Dr. Axtell pronounced to have all the microscopic characteristics of a true chancre, was removed by me five years ago, and the patient has remained free from even the slightest suspicion of constitutional symptoms. Such a result is exceptional but must be the justification for repeated attempts at abortive measures.

The usual treatment for an ordinary initial lesion when on the genitals is cleanliness, attained through the use of antiseptic powders, of which I find euophen or acetanilid the best. Iodoform is of course somewhat efficacious, but should not be used on account of its odor. A true, uncomplicated chancre rarely needs escharotic treatment. When its size, neglected condition, or complication by gonorrheal or chancroidal infection seems to demand the use of an escharotic, the galvano-cautery is, in recent years, the most generally used measure. The use of

nitric and carbolic acids has been largely discontinued because they are likely to flow over contiguous mucous membrane and thus cause an enlargement of the ulcerated surface. The strong 40 per cent. solution of formaldehyde is the liquid application par excellence if the surgeon desires to use any liquid application. After the use of any escharotic it is necessary to apply dressings from day to day. In such instances the raw surface is best cleansed with dioxide of hydrogen, then thoroughly dried and a dressing of aristol, euophen, or acetanilid applied to the ulcer only with a pledget of cotton or gauze, and the surrounding healthy mucous membrane protected, either by a simple dusting powder, such as stearate of zinc, or a light application of vaseline. The dry dressing is in every instance the preferable one.

When the initial lesion is extra genital, and especially when it is in the mouth, the difficulties of treatment are often increased. In such cases the patient will often refuse to concur in the diagnosis, and cannot be made to realize the necessity for proper treatment and continuous observation. On the lip the dry method of treatment can be followed with a fair degree of success. On the tongue or in the throat, treatment becomes somewhat difficult, but is all the more urgent. Nitrate of silver in strong solution is the best local application for a chancre on the tongue. A 40 to 60-grain solution should be applied every second or third day if necessary. Precocious ulcerating gummata in the buccal and faucial mucous membranes, which are

very apt to occur in connection with such an initial lesion, as well as occasionally in the progress of ordinary fulminant cases, need to be watched for carefully and energetically treated both by local applications and by early resort to internal medication.

The inguinal lymphatic enlargements in association with the genital initial lesion rarely need special treatment, but when the enlargement is excessive or painful it may be necessary to resort to the early use of mercurial inunctions. Since inunction partakes of the nature of constitutional treatment it should not as a rule be employed until there have been other manifestations of the disease than the initial sore. I heartily agree with the advice of the majority of writers that constitutional treatment should be if possible deferred until secondary manifestations are apparent. This delay is justified (1) because it renders the liability of error in diagnosis less; (2) because the regularity of development of the disease is not interfered with; (3) because the patient himself is then more firmly convinced of the nature of his trouble and the necessity for continuous surveillance thereafter; and (4) because, as a rule, constitutional treatment is not curative in effect before the disease itself has become constitutional, but simply renders the first eruptions less characteristic and thus tends to confuse both physician and patient.

The constitutional treatment of syphilis is not the simple routine that some apprehend it to be. We have of course the specific medication with mercury and iodid of potassium. These

remedies are the specific antidotes of the syphilitic poison. Then we have the tonic treatment of the digestive tract, to enable it to withstand not only the disease process, but the local disturbances that are so apt to follow ingestion of the specific medications. Third, comes the treatment of the degenerative blood changes that are the inevitable accompaniment of syphilis. Fourth, and last, the eliminative treatment that not only aids the specific medication but prevents depression by the medicaments themselves and enables the system to bear a larger and more continuous dosage of the specifics.

The time to begin the administration of mercury, the form in which to give it, the dosage for the particular case and the length of time it may be continued, are sufficient factors alone to make a very pretty problem in therapeutics out of every case of syphilis that presents for treatment. It is rarely justifiable to administer mercury until secondary symptoms have become manifest. Exceptions to this rule are the fulminant cases of infection, when acute febrile disturbance succeeds the initial lesion before the rashes appear; when lymphatic involvement appears early and becomes excessive; and especially when the lesion is in the mouth and the glands of the neck become seriously involved at an early stage. These instances do not admit of delay. Fortunately the acute conditions will usually be sufficient to convince the patient absolutely of the nature of his case without waiting longer for the appearance of the rash. But in practically all other cases, except in pregnant women, it is

better to await the appearance of the macular eruption.

The methods of administering mercury are many and varied. American practitioners in general practice prefer to give the remedy by the mouth or by inunction. In the former case the bichlorid, the biniodid, or protiodid are preferred, although many older practitioners still like to use hydrarg. cum creta. At first the mercury should be given alone and it should be pushed to the verge of tolerance; this will be, for most persons, of the protiodid something less than two grains daily in divided doses; of the biniodid a daily total of not more than two-thirds of a grain; of the hydrarg. cum creta a daily total of about ten grains. These totals must be reached by a gradually increasing dosage and the condition of gums and the bowels carefully watched from day to day. In this connection it seems well to direct attention to the cast iron insolubility of some of the ready made pills of these medicaments. For prompt therapeutic effect it is necessary that the mercurial be absorbed after ingestion. After the patient has taken mercury about ten days it is time to begin the administration of iodids. The initial dosage need not exceed ten grains three times daily; if the eruptive manifestations begin to disappear promptly with this dosage it need not be increased. If, however, after three days there is no modification of eruption, or if it continues to increase and mucous patches begin to develop, the iodid dose should be rapidly increased at the rate of five grains per dose each day until the disease manifestations begin to

abate. There are not many cases that require over ninety grains per day; but there are some that demand very greatly superior dosage; this is found to be true in old and neglected cases, especially when ulcerative changes of the skin and gummatous deposits in the nerve centers have to be dealt with. The maximum dosage of iodid of potassium that I have employed was 960 grains daily for a period of over a month. Other reporters have often exceeded this dosage in desperate cases. The index of a sufficient dose is the beginning of clinical improvement, and so long as improvement continues and nutrition improves the maximum dosage need not be modified until the active clinical signs have disappeared.

Very mild syphilitic infections are usually influenced with sufficient rapidity and certainty by the internal use of mercurials. More severe cases do not come under the influence of the remedy with a sufficient degree of promptness when it is so used; nor will the intestinal tract submit to the necessary rapid increase of dosage. It then becomes advisable to get the mercury into the system through the skin by means of inunctions. Ordinary mercurial ointment rubbed into the skin of the groin, the axilla, and the soles of the feet alternately is the method more commonly employed. At the resorts, such as Hot Springs, it is rubbed into the back, and an expert rubber does the work instead of the patient himself. When absorption is thus increased it is necessary that there shall be coincident provision for elimination; the iodids must be pushed somewhat vigorously

and frequent baths must be taken. In most cities it is possible to order a Turkish bath once or twice a week. Where the facilities for this do not exist, an ordinary hot bath taken just before retiring every second night will answer the purpose fairly well. These measures must be continued until the manifestations have disappeared and the patient begins to gain flesh again.

Malignant, fulminant and neglected cases sometimes demand rapid mercurialization by volatilizing calomel or the metallic mercury. While such cases are rare, this measure must not be neglected when they do occur.

In Europe there is more frequent resort to the hypodermic method of administering mercury than in America. I have no personal experience with the practice and do not find in the literature sufficient justification for deserting the methods that are more common here and which have thus far given me sufficiently satisfactory results.

In administering mercury internally many prefer to use the bichlorid in solution with iodid of potassium, and a very commonly employed mixture contains one-thirty-second of a grain of the bichlorid and ten grains of the iodid to each dram. This convenient method of employing the "mixed treatment" is well suited to mild cases, and also permits the use in the same mixture of a bitter tonic such as *nux vomica*, gentian, or *calumba*. It not infrequently seems necessary to add to the specific medication some form of iron which may often advantageously be combined with arsenic. The Blaud pill meets the requirements of many cases; powdered iron in

a tablet with arsenious acid and strychnin sulphat or nitrat is also often employed; while others prefer to use some of the scale compounds of iron, such as the potassio-tartrate or ammonio-citrate or a mixture to which some form of quinin has been added.

Well cooked, nutritious food is very necessary to the syphilitic patient. Eggs, milk, rare beef, and bread and butter must constitute the principal portion of his diet; vegetable food should not be entirely omitted, but many practitioners discontinue any of the vegetable acids while mercury is being administered. Personally I have not seen any bad effects from permitting vegetable diet as usual, with a warning against rhubarb, asparagus, spinach and excessive quantities of lemonade. Alcoholic and malt liquors should be permitted sparingly, if at all. A glass of beer twice a day or one glass of whisky at bed time may safely be allowed to those accustomed to the use of these beverages.

The question of sending a syphilitic to some health resort, such as the Hot Springs, presents itself so often that we may take a moment for its consideration. I have never discovered that the medication there is any different from that with which we are all familiar and which we have all successfully employed for years. Usually the methods at the resorts are so routine that the patient does not receive the same personal care and study of his case that he would receive at home. On the other hand, he is at a place where there is no necessity of concealment of his condition and where he can make it his

business to attend to himself, take his medicines and baths regularly, and think of nothing but getting well. To send a patient from his home to a resort for the treatment of syphilis is therefore advisable when he either will not or cannot take proper care of himself and implicitly follow directions at his home. Unfortunately the very class of patients who are best able to care for themselves properly at home and to receive the best attention from their own physicians are the ones most

likely to wish to try the Hot Springs or some similar resort. Under some circumstances it is wisest not only to accede to their wishes, but to anticipate them by recommending absence from home during the existence of rashes or of buccal mucous patches. When these have disappeared it is usually easy to keep the patient at home and to give him effective treatment with quite as good a degree of success as any physician at a health resort for this class of diseases.

Syphilis of the Abdominal Viscera.

By HENRY SEWALL, M. D., PH. D., DENVER, COLO.
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Luetic changes in the abdominal organs occur, in the great majority of cases, as late manifestations of the disease; although symptoms involving these viscera, particularly the alimentary canal, may appear among the early or "secondary" phenomena of syphilis. In reviewing my clinical experience, I am convinced that one class of cases above all others has escaped my mental grasp. So often post mortem examination has revealed the scars, adhesions, distortions and parenchymatous changes of organs which must have had their cause in long standing syphilis, but which, during life, failed to give signs of their presence, though the symptoms of morbid change have usually been sufficient to excite correct suspicion. Two reasons are obvious for failure to clinically determine the luetic nature of this visceral disease: 1. Syphilis of the abdominal organs may progress

indefinitely without exciting tangible symptoms. 2. The signs and symptoms of visceral syphilis so closely parallel those of non-specific disorders that, unless extraneous considerations make the diagnosis of lues probable, the mind of the observer almost inevitably fastens upon and holds to the non-specific explanation of the clinical conditions. It may well be urged that in the consideration of chronic abdominal disease the suspicion of syphilis as an etiological factor should always be held in view, and that the diagnosis of this disease should not so generally be limited in its foundation to the mere exclusion of other disorders.

Disorders of the digestive tract, in many cases, owe their origin directly or indirectly to syphilis. Gastric dyspepsia is a common concomitant of the disease. It is a functional disorder and is apparently the result of depraved gen-

eral nutrition. A very important affection is *chronic gastritis*, which is the chief cause of the poor nutrition of the chronic syphilitic. Its course and symptoms do not distinguish it from the non-specific disorder. This form of gastritis is a feature of late syphilis and is usually accompanied by luetic affections of other abdominal organs, as the spleen, pancreas and liver, and it is perhaps the indirect consequence of disease of these organs. Gastritis may exist alone or be associated with gummata or gummatous ulceration of the gastric mucous membrane. The *round or perforating ulcer* of the stomach is a common lesion in syphilis. According to recent statistics it occurs in nearly 20 per cent. of cases. This is distinct from the gummatous ulcer which may be found independently. The round ulcer probably has its origin in the disturbance of blood flow to the gastric mucous membrane due to syphilitic arteritis. The symptoms, course and termination of the syphilitic gastric ulcer do not distinguish it from the non-specific ulcer, but it is important to notice that in the former, the specific lesion, the accompanying gastralgia is characteristically nocturnal in its periods, while in the simple ulcer the pain has no regular time of onset. One of the most infrequent accompaniments of lues is *gumma* of the stomach. The new growth arises in the submucosa and works its way towards the free surfaces. Its occurrence may be evidenced on the post mortem table by ulceration or by the presence of contracting scar tissue.

Syphilitic disease of the intestines.
Except as limited to the rectum, little

is known of syphilitic disease of the intestines. There is distinct evidence, however, that acute enteritis involving the duodenum may appear as an early symptom of the disease, simultaneous with the cutaneous eruption. The catarrh may spread to the bile passages and cause jaundice. The affection may pass on to chronic enteritis. It is not to be distinguished from simple enteritis except that it yields only to specific treatment. The ordinary syphilitic enteritis is chronic and is the result of ulcerative lesions which may be due to the following various conditions: 1. The breaking down of circumscribed gummatous infiltrations of the gut. 2. Ulceration of Peyer's patches and less frequently of the solitary follicles. 3. Ulcerations which depend upon the breaking down of tissue involved in waxy degeneration. 4. Extensive diphtheroid ulcerations involving colon and rectum and probably due to a mixed infection (Neumann). In practice by far the most important intestinal lesions of lues are to be found in the rectum. The lesions are, for the most part, the result of direct infection through morbid secretions applied to the anus, and they involve the rest of the rectum by contiguity. They are more common in women than in men, obviously partly on account of anatomical relations. The lesions are usually found near or just above the anal ring. In the early or secondary period of syphilis, ulcerations appear associated with papules and infiltration of the anal folds, the infection probably being established through the anal fissures. In the late stage of the disease the ulcerations usually re-

sult from the breaking down of gummata in the anal or peri-rectal tissue, or from disintegration of the rectal wall, usually with, but sometimes without, antecedent gummatous formation. The ulcerative process may spread through the rectum and reach into the colon. An important sequel, or rather accompaniment of ulceration is the stimulus given to the formation of fibrous tissue in the affected areas, the contraction of which distorts or constricts the rectum and thereby produces some of the most important clinical features of the disease.

An unsavory adjunct of syphilis in this region is the rectal catarrh, resulting in a foul, more or less abundant purulent discharge which arises from the diseased surfaces. Finally, one of the most frequent and hopeless conditions found in late lues is *amyloid or waxy degeneration of the intestine*, recognized post mortem by the stiffness, paleness and waxy lustre of the intestinal mucosa. It is usually associated with similar degeneration of spleen, liver and kidneys. The clinical history is marked by indigestion, uncontrollable diarrhoea, dropsy, etc.

Syphilis of the pancreas may be dismissed with a word, not only because acquired disease of this organ is one of the rarest phenomena, but because there are no certain clinical signs of its existence. Pancreatic lues is of frequent occurrence in the inherited disease.

Syphilis of the spleen is usually attended with evidence of the disease in other abdominal organs. It has recently been demonstrated that *acute splenitis* may occur among the early constitu-

tional symptoms of the disorder, and subsides under the influence of specific treatment. Syphilitic *interstitial splenitis* is seldom found except as associated with syphilis of other viscera. The organ is slightly enlarged, unusually firm and its surface is irregular from contracting scar tissue. Unless attended by peri-splenitis the condition can hardly be recognized during life. *Parenchymatous inflammation of the spleen*, and the development of *gummata* in the organs are rare events. Finally, *amyloid degeneration* of the spleen is not an uncommon effect of late syphilis, occurring more often than the similar change in the liver. It is usually combined with a like degeneration of other abdominal organs, and this association is important in diagnosis. The amyloid spleen is increased in size and in resistance to the touch. Profound disturbance of digestion, colliquative diarrhoea, etc., attend it and its associated conditions.

Syphilis of the liver is perhaps more apt to be recognized clinically than similar disorder of any other abdominal viscus. In early lues, coincident with the eruption, a jaundice of doubtful pathology is apt to appear, fading as the skin becomes clear.

There are two syphilitic inflammations of the liver: 1, *interstitial hepatitis*; 2, *gummatous hepatitis*. They are usually accompanied by perihepatitis and they may be combined either with the fatty or the amyloid degeneration. There is substantial reason for supposing that syphilitic inflammation of the hepatic parenchyma stands in causal relation to acute yellow atrophy of the

liver. In the *interstitial* form of hepatitis the liver is reduced in size, the surface is rough and is marked by various prominences separated by deep clefts. There are usually adhesions to adjacent organs. The condition is commonly described as one of the tertiary manifestations of lues, though some authors consider it part of the secondary stage. I have seen this form of hepatitis well marked in an autopsy on a negro boy about sixteen years old. Adhesions of the liver to the diaphragm and adjacent organs are among the most common finds of our autopsies, and they represent perihepatitis of more or less remote occurrence. Evidence of this condition may be gained during life by observing the lessened mobility of the liver as witnessed by the small excursion made by the upper line of liver dullness with deep respiration. The welding of the liver to the diaphragm probably prevents normal contraction of the muscle fibres so restrained. The contraction of the excessive amount of connective tissue in interstitial hepatitis causes atrophy of the liver cells, with gradual loss of hepatic function. Ascites usually, though not always, results from interference with the portal circulation, and hemorrhages from the oesophagous, stomach and intestines may occur from bursting of the swollen varicose veins of these parts. When the disease has not progressed too far anti-syphilitic treatment may effect a cure. My records show marked improvement following the exhibition of potassium iodide in cases giving satisfactory clinical evidence of syphilitic interstitial hepatitis. This form of

syphilitic hepatitis is particularly apt to occur among spirit drinkers, but *gummatous* hepatitis is otherwise said to be the more frequent form of the disease. In *gummatous hepatitis*, the perihepatic inflammation is a nearly constant accompaniment. The surface of the organ is more or less puckered by sheafs of connective tissue which cause its mass to bulge in projecting knobs. The gummata vary in size from a pin's head to a walnut. They form rounded masses of central caseous material inclosed in a fibrous capsule. They are found both subserous and in the depths of the organ, and are not sharply defined from the parenchyma. This form of hepatitis may progress without producing clinical symptoms. The size of the liver is usually normal or diminished. The surest clinical sign of the condition is the recognition of deep clefts in the edge of the liver and of prominences on its surface. Ascites in the uncomplicated condition is rare. Functional disturbances of the digestive tract are constant phenomena. Gummatous hepatitis is a disorder of tertiary syphilis.

The amyloid or waxy liver is found in constitutional syphilis oftener than in any other disease except tuberculosis. In the pure form of the disease the organ is commonly enlarged in all dimensions, though not to the enormous extent found in waxy livers due to other causes. The density of the liver is increased, its surface is smooth and on section the substance is pale gray-yellow or gray-brown and shows the characteristic reaction with iodine. Waxy degeneration is usually the se-

quel of prolonged syphilitic suppuration of bone or of extensive lesions of the skin and mucous membranes. The condition is usually combined with amyloid degeneration of spleen and kidneys. The diagnosis is often extremely difficult on account of the lack of positive clinical signs and symptoms of the disorder. Some aid may be gained from the increase in the size of the spleen, which is also in an amyloid condition, and the history of the case is indispensable in directing the examination.

Syphilis of the kidneys is, as might be supposed, a very common event, though it is doubtful whether the specific etiology of pathologic urine is often borne in mind. Still less often, probably, is anti-syphilitic treatment applied to such disorders by reason of the traditional belief in the irritant action of mercury and potassium iodide on the kidneys. *Albuminuria* occurs in all stages of syphilis. When renal lesions are not present the disturbance is probably produced by the syphilitic toxins circulating in the blood. *Paroxysmal haemoglobinuria* is relatively frequent in syphilis and is not clinically different from the non-specific form except in its amenability to anti-syphilitic treatment. *Syphilitic nephritis* may represent most forms of kidney disease. It may occur as 1, Parenchymatous, acute or chronic; 2, Interstitial; 3, Gummatus nephritis. These forms may be combined together or with, 4, Amyloid or fatty degeneration of the kidney (Neumann). The parenchymatous disease can occur in any period of lues but is especially found in its early stages. The suspicion that the renal lesions of syphilis are the

result of specific treatment does not appear to be well founded; on the contrary, severe cases of luetic nephritis have been found to improve on such treatment. *Syphilitic interstitial nephritis* is a late manifestation of the disease. Its onset is so gradual that it escapes attention much longer than the similar disorder of non-specific origin. Post mortem the two kidneys are apt to be found very unequally affected.

It is impossible to discuss here the origin of the renal changes of syphilis—whether they are directly due to the action of the specific poison upon the secretory protoplasm or indirectly through disease of the vascular walls or of the interstitial tissue. The other kidney diseases of syphilis will be dismissed with a word except as to the relative frequency of their occurrence. Spies, in autopsies upon 220 syphilitics, found that 147, or 66.8 per cent., showed lesions of the kidneys. Among these were 42 cases of amyloid kidney and 7 of gummata of the kidney. It should be said that uncomplicated waxy kidney, as it occurs in other diseases, is a rare event in syphilis.

Recently the police of Denver made a slight spasmodic attempt at abating the nuisance of hucksters' cries. This was not due so much to the fact that such noises are detrimental to the health or are nuisances generally, but solely because the day sleep of one of the police captains had been disturbed. No permanent good was established.

Inherited Syphilis.

By SOL. G. KAEN, M. D., LEADVILLE, COLO.

Inherited syphilis is not the most satisfactory subject to write upon, for the reason that opinions are so much at variance as to whether the ovule receives its virus from the mother exclusively, or whether the father alone can be responsible for the infection without first transmitting the disease to the mother and the ovum receiving its infection from the maternal side only.

Angier Ferrier in 1553 stated that hereditary syphilis had three possible sources of origin: (1) the semen of a syphilitic father; (2) the impregnated ovule of a syphilitic mother; and (3) infection of the foetus by the blood of the mother who had acquired syphilis after conception. Hunter denied the hereditary transmissibility of syphilis from a father. Swediaur, in the beginning of the nineteenth century, contended that syphilis may be inherited, and that in almost every case of the kind the disease is transmitted from the father and not from the mother. Cullerier and others, on the contrary, asserted that syphilis is transmitted to the foetus through the mother alone. After four and one-half centuries of discussion, scientific research, and clinical experience, the consensus of opinion to-day, as near as I can ascertain, is that Ferrier's views, published in 1553, were correct; that syphilis in the child may be derived from either parent; that the general result is the same, whether the father or the mother is

affected; also that infection of the child can take place, during foetal life, if the mother acquires syphilis before the seventh or eighth month of utero-gestation. The shorter the interval between the infection of one or both parents and impregnation, the greater the liability of the foetus to become affected. Maternal infection is more potent in its influence for harm than is that from the father, since the blighting effect of an ovarian infection is reinforced by the devitalizing influences of a maternal dyscrasia.

Fournier's tabulation, based on 500 observations, expresses the relative gravity of the three forms of descent. Among the cases of paternal heredity, 28 per cent. died and 37 per cent. showed lesions of syphilis. Among the cases of maternal heredity 60 per cent. died and 84 per cent. showed lesions of syphilis. Mixed heredity caused deaths in 68½ per cent. and lesions in 92 per cent. These estimates demonstrate that paternal heredity, though more frequent than the other forms, is less than half as communicable or fatal as is maternal heredity, and that the latter is less virulent in its effects than mixed heredity. It has been proven that active specific treatment during pregnancy greatly reduces the mortality of the children, and many of them are free from any manifestation of the disease.

It may probably be accepted as a fact that if syphilitic manifestations occur

during intra-uterine life or immediately after birth, the malady is likely to prove very severe. The number of infants affected at these periods that survive is not large. The older the child at the date of the first symptoms, the more likely it is that it will bear the disease and prosper under the treatment.

Children of syphilitic parents often show no signs of the inherited disease at birth; its presence, however, is sooner or later manifested by unmistakable symptoms. The interval is sometimes considerable, and this characteristic latency constitutes one of the differences which exists between the acquired and the hereditary forms of the disease. It may be laid down as a general rule that the period at which hereditary symptoms manifest themselves depends upon the condition of the disease in the parents. The more recent the infection and the more marked the evidence thereof, the earlier and the more decided will be the manifestations in the progeny. Of the children who survive, many reach a condition of apparent health, though many bear through life the marks of their inheritance.

Abortions, miscarriages, death of the foetus, a child born with marked symptoms, another with mild symptoms, are, so to speak, measures of the intensity of the parents' disease. If the disease in the father or mother be almost extinct at the time of impregnation, the child, when born, may be to all appearances perfectly healthy, and may either remain so or else develop symptoms of syphilis some months or years afterwards. In a large majority of cases the symptoms of hereditary syphilis appear

either at birth or some time during the first three months. It is only in exceptional cases that the outbreak of the symptoms is deferred until the fifth or sixth month. When the manifestations of syphilis are delayed beyond the third month, it may generally be anticipated that the complaint will assume a comparatively mild form and will yield readily to treatment. The aptitude to transmit the disease decreases spontaneously, in many cases, with the lapse of time. The influence of mercurial treatment of the parents upon the health of the offspring is much more certain than that of time alone. A pregnant woman who is syphilitic, whether her syphilis was acquired before or after conception, should be thoroughly treated to avoid disaster to the child.

Colles' law, which states that a child begotten by a syphilitic father and born of an apparently healthy mother cannot infect her, even though it exhibits venereal ulcers on the lips and tongue and in suckling cause cracks and fissures in the mother's nipple, was formerly regarded as a positive proof that the mother of a syphilitic child was always herself syphilitic, since only in this way could her immunity be explained. Diday applies to the explanation of this well known phenomenon Pasteur's discovery that methodical repetition of inoculation alternates and ultimately neutralizes the virus of disease. This is shown when animals are repeatedly inoculated with the virus of hydrophobia. When a woman bears a syphilitic child the blood freely circulating between mother and foetus becomes a vehicle for repeated inoculation of the alternating

fluid, and the mother is rendered proof against syphilis by seven or eight months of perfect Pasteurization.

We are well aware that the opinion prevails that after three years of active treatment a patient suffering from syphilis is considered cured; but according to statistics cases of hereditary syphilis have been observed which were transmitted more than six years after primary infection; also apparently carefully observed cases are recorded pointing to heredity from parents in the fifteenth and even in the twentieth year.

Hereditary syphilis differs from the acquired disease in being constitutional from the first. There is no primary stage, that is, there is no chancre, nor in the course of its development can the manifestations of the disease be classed under periods.

When a child the subject of hereditary syphilis is born alive, the appearances vary in different cases. In a large proportion of instances the child appears healthy and vigorous; in another class the children are puny and delicate, but no decided symptoms appear until several days or weeks have elapsed; while in a third and less numerous class the children are born with marked evidences of the disease. The most prominent symptoms in hereditary syphilis are the affections of the skin and mucous membranes. Before any eruption appears, there are, in many cases, certain peculiar symptoms by which the hereditary taint may be recognized.

The typically syphilitic child is at birth a wasted, wizened, snuffling, feeble creature, with a weak, hoarse cry. The face looks wasted, the integu-

ment is thrown into folds, giving the child the appearance of old age. The nostrils, lips and angles of the mouth are scored by fissures, and the sub-maxillary glands are hard and swollen. The skin generally is either dry or has a shining, waxy appearance; the smoky or sooty tint is well marked. The most prominent of the skin affections are the vesicles or bullæ, which are most frequently found on the soles of the feet, palms of the hands, and nates. The most frequent affection of the mucous membrane is the nasal catarrh, which attacks a very large proportion of syphilitic infants. It appears early, often, if not always, preceding the eruption. The mucous membrane of the nose becomes swollen and partially closes the nasal passages. A nasal discharge appears, gradually increasing and causing the symptom known as snuffles. There is no organ or part of the body of a child born tainted with syphilis that may not be affected to a greater or lesser extent—from the bones, muscles, arteries and veins, to the brain, nerves and nerve-endings, not overlooking the nails, hair and teeth. Careful attention has been given to the teeth. The crescentic notch, or what is known as the Hutchinson teeth, is of great diagnostic value, being discolored to an ashy gray; the enamel is imperfect, the incisors are pointed and narrow at their edges, and furrowed with a crescentic notch, which, once seen, cannot easily be mistaken for any other condition.

The treatment of inherited syphilis may be considered under these different heads: 1st. The prophylactic treatment

of the parents before conception. 2d. The treatment of the mother during pregnancy. 3d. The treatment directed to the child. This may be carried on in three different forms, (1) by mercurializing the mother, and in this manner having the child's food medicated, (2)

by inunction, (3) by direct medication per mouth. Hydrargyrum cum creta is the preferred preparation for these infants; it is usually administered in one-half grain doses twice daily, but may be gradually increased.

Is Syphilis Ever Actually Cured.

By F. FINNEY, M. D., LA JUNTA, COLO.

The best authorities, I believe, agree that syphilis is caused by a living organism. They also agree that we have not yet discovered what this organism is. This contagium at the point of infection gains entrance to the circulation through the lymph channels, and the whole human organism is infected. It is true the contagium usually loses its destructive qualities in time, either with or without treatment, and it will then fail to propagate the disease in healthy persons. It does not necessarily follow that the individual having the disease is cured.

Lang says in this connection: "The supposition that the danger of infection ceases after syphilis has lasted for two, three or four years is based upon very insecure premises." "But even if the poison loses its power of infection, it may remain latent until by some often external cause it is stimulated to new growth, and produces in a definite part a very characteristic reaction which represents the late form of syphilis." "The semicircular and circular forms of the later syphilitic manifestations justify the conclusion that the power of propagation by the micro-organism is still preserved." "It is probable that the

virus retained in the lymphatic glands, and in other tissues, may remain inactive for a considerable time, and then be gradually destroyed; but if it reaches the circulation through the vasa efferentia, which it may do after years, then relapses occur in remote tissues."

It appears, then, from our present knowledge of the pathology of this disease, that we have not yet arrived at a point where we can apply a treatment which is curative. I can readily believe that the time will soon come when the disease will be so thoroughly understood that we will have the means at hand for its *cure*, as we now have most notably in diphtheria.

I can do no better, in closing the negative side of this question, than to quote again from Lang on Treatment of Syphilis: "It must be honestly admitted that while we can, probably in the great majority of cases, not only cause the disappearance of the symptoms, but also prevent the transmission of the disease by heredity, yet up to the present time we *do not* possess any mode of treatment by which we can *positively* cure this dangerous disease, radically, and thus absolutely protect the patient against relapses."

Prophylaxis of Syphilis.

By E. STUVER, M. D., FORT COLLINS, COLO.

The old adage, "An ounce of prevention is worth a pound of cure," nowhere applies with greater force than in connection with the dread disease syphilis.

The question as to the best means of limiting its communication and prevalence has received the earnest attention of physicians, sanitarians and philanthropists, and many fierce polemical battles have been fought and are still being waged over this subject. At one time it was thought that a strict licensing and medical inspection of prostitutes would solve the problem; but the experience of Berlin, where medical inspection was carefully and rigorously carried out, has proven this to be a false hope, and we are brought face to face with the fact that other and different measures must be adopted if we would stay the ravages of this fell disease.

Legal restriction and medical examination not only fail to prevent the spread of the disease, by those subjected to their restraints, but such measures enormously increase the number of clandestine prostitutes or "soft snaps," as these latter are sometimes more euphoniously designated by their admirers or apologists. I believe the experience of physicians who have given the matter careful attention will corroborate the statement that these clandestine prostitutes are more liable to convey the disease than those who ply their vocation openly. Business reasons and a de-

sire to secure trade compel public prostitutes to keep clean, while the lack of these incentives leads to a very different condition in the other class, of which fact I have often had very emphatic evidence furnished by their victims.

But the question very naturally arises, What shall be done? The state isolates and quarantines persons suffering from scarlet fever, diphtheria and other contagious diseases; it erects small-pox hospitals and confines those affected with this easily preventable and comparatively harmless disease within their walls. Why then should it not likewise throw its protecting ægis over the community and also confine within special hospitals all persons with syphilis during the contagious stage of the disease, or until discharged by competent medical authority. This, in connection with county registration of syphilitics would, I believe, do much toward holding the disease in check. But the only measure which in my opinion will ever produce a decided restriction in its prevalence is a more careful education of the people as to the dangers of the disease and the best means of avoiding it.

In the first place a higher moral tone should be inculcated and a single standard of morals for both sexes should be insisted upon. Whenever society can be brought to adopt this view and men can be made to feel that the disease leaves the same stigma of shame and

disgrace upon them that it inflicts upon their wives and daughters when contracted in the same way, we shall possess a strong inhibitive influence in checking the disease. When a clear and imperative demand shall be made by the moral sense of our people, that young men shall rule their passions rather than be worse than bestialized by an unbridled indulgence of them; when the great educators, teachers, parents and physicians shall be impressed with the importance of imparting a clear knowledge of the physiology and proper use of the sexual functions, and the ravages caused by venereal diseases, we shall be spared the disgusting spectacle of persons in the active contagious stage of the disease mixing freely in society, and of men in high places pooh-poohing or apologizing for youthful vices.

In closing I desire to reiterate the conclusions drawn from a most excellent paper by Dr. Fred C. Valentine*.

1. Sufficient of the physiology and pathology of the genito-urinary apparatus should be taught in institutions

for higher education to convey to students the dangers of genito-urinary diseases to themselves and others.

2. Similar instruction should be given in schools attended by boys at the age of puberty.

3. No man who has ever had gonorrhœa should be allowed to marry until it is proved by a physician that he cannot infect his wife.

4. Regular physicians should be elected by their societies to deliver evening lectures to the public on genito-urinary diseases.

5. Every father should be taught to warn his sons of the dangers of genito-urinary diseases. When, from incompetency or delicacy, the father cannot or does not wish to do this, the family physician should discharge that duty.

6. Every medical society should elect its most competent member to write at least one article on the subject, worded for laymen's comprehension, and to be published under the auspices of the society.

*Journal A. M. A., March 3, 1900, p. 532.

Syphilis in Armies

By LIEUTENANT-COLONEL HENRY LIPPINCOTT, MEDICAL DEPARTMENT, U. S. A.,

Syphilis in armies, as we all know, does not differ from the disease as manifested in civil life, though no doubt conditions occasionally arise whereby the disorder, as it affects the soldier, is intensified.

The great attention that is now paid

to hygiene in all important armies serves to eliminate or to diminish factors that formerly were conducive not only to the spread of syphilis, but of other infectious diseases as well. As Armstrong says, "A study of syphilis in relation to public health entails a con-

sideration of the danger of syphilis in regard to the individual," and surgeons, civil and military, the world over, recognizing this fact, have done much to prevent the infected from infecting others. Medical men have called the law-maker to their aid, and England's contagious diseases acts have demonstrated beyond question the good that may be done for the soldier and civilian alike under the guidance of our profession. In this connection and for an interesting summary of this work, your attention is invited to the *London Lancet* for August 12, 1899. In the United States army we have not had the support of the civil law as have the military and naval authorities in the British empire, but our commanders and surgeons have done their utmost to prevent a large sick list from the disease we are considering, and this not without material success.

In the United States army (volunteer and regular) our methods are chiefly advisory, and not infrequently we see excellent results from our endeavors. In this regard I would ask your attention to a circular that was issued to the troops of the Eighth Army Corps on this subject in August, 1898. It is an earnest of the beneficial results we expected from wholesome advice, and reads as follows:

Headquarters Eighth Army Corps,
Manila, P. I., Aug. 27, 1898.

CIRCULAR NO. 3.

The following is a copy of a communication received at these head-

quarters and is published for the information of and as a warning to the troops. Commanding officers of regiments and separate military organizations and detachments will communicate the contents of the same to the enlisted men under their supervision and control.

By command of

MAJOR GENERAL OTIS.

(Signed) THOMAS BARRY,
Assistant Adjutant General.

"HEADQUARTERS DEPARTMENT OF PACIFIC AND EIGHTH ARMY CORPS, Chief Surgeon's Office, on board steamer Newport.

Manila Bay, July 27, 1898.

The Adjutant General, Headquarters Department of Pacific and Eighth Army Corps, on board U. S. steamer Newport:

Sir—It becomes my duty to invite attention to the great danger of syphilitic infection in the men of this command. It is believed that syphilis in a most virulent and serious type exists in these islands, and that our men are very liable to be infected unless stringent measures are adopted by the commanding officers to prevent the men visiting houses of ill-fame or associating with lewd women. It may be necessary to adopt a system of examination, when Manila falls, but in the meantime I do not think it advisable to recommend such action. This communication is intended to suggest the terrible consequences that may result in the United States by the arrival there of men poisoned by Asiatic syphilis, not to mention the loss of time consequent upon

the disability the men may incur. Very respectfully,

(Signed) HENRY LIPPINCOTT,
Lieutenant-Colonel and Deputy Surgeon General, U. S. A., Chief Surgeon."

In our home stations the unfortunate soldier is segregated, for in all well regulated hospitals of the United States army a room is set apart for venereal cases, and so long as the patient remains in hospital the rules are absolute in regard to the possibility of infection. The Lock hospital system has in a measure, therefore, its counterpart in our service. We take the greatest care that the patchy mouth shall not give out its poison to others through means of pipes, drinking cups, etc., and we see to it that the soldier who has a primary sore is not permitted to depart from the quarters assigned to him. All such cases are carefully watched and treated until danger of infection appears to be over. Yet notwithstanding all that is or has been done to prevent syphilis in armies, the disease always exists in greater or less degree and is the cause of the loss of much time to the governments concerned.

It is impossible with the data at hand to arrive at a full statistical record of the disease in the various, or even in the more important, armies at present, but in so far as relates to our own military establishment, I am able to state that for the fiscal year ended June 30, 1898, the admissions on account of venereal diseases were equivalent to 84.59 cases in every thousand of the strength present, as compared with 78.08 in 1896, and with 76.32, the average of the pre-

ceding decade. For the same fiscal year (i. e., 1898), the United States army admission rate for *syphilis* was 12.04 per thousand, with 1.20 constantly on sick report—and for the calendar year 1898 the admission rate was 10.08 per thousand. The average duration of cases for the fiscal year ended June 30, 1898, was 36.46 days. For the decade 1886-1895 there were 17.45 cases of syphilis admitted for every thousand of mean strength of white troops; and there were constantly non-effective on account of the same disease 1.68 per thousand. For the same decade there were 20.98 cases of syphilis for each thousand of colored troops, with 2.02 constantly non-effective. Constantly non-effective from syphilis for same period 1.94 per thousand of mean strength; this embraces white and colored.

For the year 1896 there were 11.56 cases of syphilis taken on sick report for every thousand of mean strength of white troops, and constantly non-effective from same disease 1.28; for same year there were 4.75 cases of syphilis for each thousand of colored troops, with .38 constantly non-effective.

For the year 1897 we had 11.01 cases for each thousand of mean strength of white troops, with 1.13 constantly non-effective, while for the same year the colored troops had 23.11 per thousand, with 1.19 constantly on the sick list.

During the calendar year 1898, 71,250 men were examined for the regular army of the United States. Of these 66,237 were white and 5,013 colored. Total number (white and colored) ac-

cepted was 54,896. Of every thousand examined 9.71 were rejected on account of venereal diseases. I am not able to give reliable data in regard to the volunteers for the reason that the reports are not available.

Armstrong's tables show that in the army of Great Britain syphilis caused per thousand of strength, in

1887—116.39 admissions, 0.03 deaths, 0.64 discharges.

1888—106.52 admissions, 0.11 deaths, 0.93 discharges.

1889—92.89 admissions, 0.03 deaths, 1.05 discharges.

In the army of Italy it caused in

1887—5.68 admissions, 0.01 deaths, 0.01 discharges.

1889—8.62 admissions, 0.01 deaths, 0.02 discharges.

In the army of Prussia, Saxony and Wurtemberg it caused in

1886-'87—8.74 admissions, 0.01 deaths, 0.03 discharges.

1887-'88—6.30 admissions, 0.0 deaths, 0.04 discharges.

1888-'89—11.11 admissions, 0.01 deaths, 0.01 discharges.

He says that although these tables are meager they are sufficient to show the difference in frequency of the dis-

ease in various countries, and from the same author I gather that the percentage of syphilis in the Austrian army averages about 9.68. The writer referred to states that the number of cases of syphilis that appeared in a thousand healthy men in a year was in the English army (average 3 years)..105.3 European army in India (average 10 years)..... 67.5 United States army (average 10 years, 1881-'90)..... 11.5 Prussian, Saxony and Wurtemberg army (average 3 years).. 8.9 Native army in India (average 10 years) 8.3 Italian army (average 2 years).. 7.2

He further states: "Figures that show that from 7.2 men in Italy to 105.3 men in Great Britain and its colonies, in every thousand, suffer from syphilis, have a range of variation that is too wide for general statistical value, though undoubtedly they indicate the prevalence of the disease in the respective countries."

These figures are interesting, but I must refer you to the author should additional data be desired.

Syphilis and Trauma.

By LEONARD FREEMAN, M. D., DENVER, COLO.

The relation of traumatism to syphilis is a subject about which comparatively little is known. It was formerly believed that the connection was intimate—that injuries to syphilitic individuals and operations upon them were

often followed by more or less serious complications—but this extreme view has undergone considerable modification. We now believe that many unfortunate results have been due to mixed infection and ordinary sepsis;

the embryonic tissue of gummata, like that of post typhoidal granulomata and tubercular deposits, being very susceptible to the action of pus-forming micro-organisms. There is little question that under favorable circumstances most injuries heal as rapidly and as thoroughly in syphilitic patients as in others, providing no pre-existing specific deposit be directly involved.

Primary Syphilis.—There are those who claim that the virus of syphilis may infect the uninjured mucous membrane; but in the vast majority of instances, if not in all, a preliminary lesion is necessary, and with the skin there are certainly no exceptions to the rule.

It is a matter of common experience that primary sores respond unfavorably to irritation arising from cauterization or other causes, and that a mixed infection may thus be inaugurated resulting in suppurating bubo.

Secondary Syphilis is less closely related to traumatism than either the primary or tertiary forms. It is true, however, that eruptions of various kinds can be increased in severity or even precipitated by irritations of the skin, such as excessive perspiration, uncleanness, the rubbing of tight clothing, etc. This helps to explain the appearance of condylomata about the anus and genito-femoral folds, and the intensity of eruptions beneath the straps worn by soldiers across their bodies. We are all familiar with the bad effects of tobacco upon mucous patches within the mouth.

There is also reason to believe that secondary specific rheumatisms and neuralgias may be increased or produced by local injuries, although this is

not usually the case.

Whether syphilitic iritis is ever directly due to traumatism is questionable, but there is no doubt that its severity can be thus increased—for instance, by excessive use of the diseased eye.

The healing of ordinary wounds and injuries is little, if at all, retarded. It has often been asserted, however, that failure is apt to result in skin-grafting and plastic surgery. If this be true, it is, perhaps, due to points of specific infection existing within the skin, which may remain long after the visible eruption has disappeared.

Tertiary Syphilis.—In tertiary syphilis the effects of traumatism are quite noticeable, although they have been grossly exaggerated.

The localization of gummata of the osseous system may be determined by injury, although in an effort to assign a cause for a lesion a patient will remember those trivial injuries which are always occurring to every one, and which may have no bearing upon the existing conditions. Innumerable traumatisms are constantly being inflicted upon the bones of syphilitics without the production of gummata, which fact might be explained by assuming that a latent specific deposit must first be present.

Too much stress has been laid upon the effect of syphilis in the union of fractures. In fact, there is really no proof that union is at all retarded, unless it be through a general marasmus which at times exists to a marked degree. Usually fractures unite almost, if not quite, as readily in syphilitics as

in others.

Fractures, however, are sometimes directly produced by gummata. I have personally encountered such a condition in the tibia in which I found it expedient to resort to amputation. Some writers have also affirmed that the skeleton in syphilis might be so weakened by deprivation of lime-salts that the bones could give away under slight provocation.

These pathological fractures occur in the long bones only, and are at times multiple, cases having been reported in which both thigh bones or both upper arm bones have been broken in the same individual.

It is common knowledge that it is dangerous to interfere with gummata in any situation, unless they are completely excised, and especially is this true of osseous lesions; but after the active specific process has subsided, its effects in the shape of dead bone, cicatrices, etc., may be removed with safety.

Little is known with certainty re-

garding the part played by traumatism in syphilis of the nervous system. It may be true that an injury can determine the formation of a gumma of the brain or cord, but no proof of this has ever been produced. The same statement may be made in reference to specific manifestations in any of the internal organs. To be sure, positive statements are often made in this connection, but they are apt to be mere traditions handed down from one writer to another.

Whether we regard traumatism as a major or minor factor in specific manifestations, the fact remains that it is the slight injuries, those in the nature of comparatively trivial bruises, that are the most productive of results. The reparative processes following severe lesions are perhaps too active to permit the growth of syphilitic germs, this being analogous to what has been demonstrated by experiment in connection with tuberculosis and osteomyelitis.

Injuries to the Eye from Accidents in the Mine.

By MELVILLE BLACK, M. D., DENVER, COLO.

Professor of Ophthalmology and Otology, Gross Medical College.

(Concluded from May, June and July Numbers.)

CHAPTER IX.

Wounds Penetrating the Posterior Chamber.

A penetrating wound of the posterior chamber is almost invariably made through the anterior structures of the globe. The exceptions to this rule are gunshot wounds. It should always be our endeavor to determine if the pene-

trating substance has lodged within the globe, and if so in what portion of the globe it is situated. The foreign body may be sometimes seen with the ophthalmoscope. If this is impossible the X-ray may assist in the diagnosis. The

giant magnet will many times attract so strongly a piece of steel in the eye that pain will be induced at its site in the globe. The pain is caused by the endeavor of the foreign particle of metal to get through the coats of the eye to the magnet. The Sideroscope will no doubt prove the most valuable of all instruments for the detection of foreign bodies in the eye that are susceptible of magnetic attraction.

If the penetrating wound has been made by some instrument that has fallen out of, or has been removed from, the wound, its management is comparatively simple. The advisability of trying to save such an eye depends upon the extent and situation of the wound. If the wound is situated posterior to the ciliary body the eye should be saved. Such wounds cause but little pain unless infected. In case of infection purulent inflammation is liable to ensue and necessitate removal of the globe. Since it is always impossible to determine if the wound is or is not infected, it is well to consider it as infected and treat it as such.

The wound should be freed of all foreign matter, and any prolapsed vitreous or choroid excised with scissors, and the part touched with pure carbolic acid. The eye should then be closed and iced applications applied for at least three days. If at the expiration of this time no marked inflammatory symptoms have developed the eye can be put up in a wet bichloride dressing. The eye is to be redressed every twenty-four hours until healing has taken place. Such eyes rarely regain useful vision, and the patient is to be cautioned as to possible sympathetic involvement of the fellow eye. Since, however, wounds in this situation seldom cause sympathetic inflammation, we are justified in an attempt to save the eye even if it be sightless, since it will cause the patient much less inconvenience than an artificial eye. The exception to the above would be when the eye does not become quiet but remains inflamed, tender and sensitive to light. It should then be removed as its retention gives the patient no satisfaction, and is a source of danger to the other eye.

CHAPTER X.

Foreign Body in the Globe.

The presence of a foreign body in the globe is always a matter of the most serious import. The injury to important structures in its passage into the eye complicates its presence in the globe.

Many foreign bodies are sterile; others thoroughly septic. We are usually unable to form an accurate opinion upon this point from the history given by the patient of how the accident oc-

curred. Chips of steel flying from the drill or hammer are usually hot and therefore not very infectious. Flying particles of rock may or may not be clean. This depends somewhat upon where the rock comes from. Rock that has not been handled is of course less liable to carry upon it infectious germs than rock hoisted from the mine or found upon the dump.

The only sure way to learn if a for-

foreign body is capable of causing infection is to wait and see. Treat them all as septic until they prove themselves otherwise.

The possibility of extracting the foreign body occupies our immediate efforts; if it is septic the more reason why it should be removed. My experience has been that eyes are most frequently penetrated by chips of steel from the drill or hammer, and of all foreign bodies these are the most easily removed. We have already dealt with the removal of foreign bodies in the anterior chamber, iris and lens. We will now consider

Foreign Bodies in the Vitreous. If the chip of steel has found its way into the vitreous by way of the cornea iris and lens, a peripheral corneal section should be made, an iridectomy performed, the lens extracted, and the curved tip of a Hirschberg electro-magnet introduced into the vitreous in the direction which the foreign body took upon entering the eye. The electric current should now be turned on, and if the magnet attracts the foreign body to it a faint contact click can usually be felt. If no click is felt the point of the magnet is cautiously moved about through a small portion of the vitreous and withdrawn to see if the chip of steel has adhered to it. If the magnet has not brought away the foreign body, the same procedure is gone through with in another portion of the vitreous, and so on until the particle of steel sought for is found, or until it is deemed useless to longer continue the search for it.

When the chip of steel has passed

into the vitreous through the ciliary body, the magnet should be introduced through a fresh scleral incision made posterior to the ciliary wound. The introduction of the magnet should be made as above described. In withdrawing the magnet from the eye, the lips of the wound should be held apart by forceps that the foreign body in its exit may not be dragged off.

The after treatment of an eye from which a foreign body has been successfully removed consists in iced applications continuously applied for the first few days with atropine every few hours. As soon as it is established that infection has not taken place, the eye should be put up in a wet bichloride dressing, which is to be changed daily until the eye is perfectly quiet.

If infection has taken place we may expect a purulent inflammation of the vitreous, which will be evidenced by pain, increased inflammation of the globe, puffiness of the conjunctiva, and finally by pus in the anterior chamber. Such an eye should be sacrificed at once.

We will now return to an eye from which the operator has been unsuccessful in removing a chip of steel with the magnet. If the eye is removed it will be found that the chip of steel has either embedded itself in the sclera opposite the point of entrance, or has passed through the eye and into the orbit. The latter is very infrequent as the force of such a flying chip is rarely great enough to cause it to penetrate so much tissue. It is also possible that the foreign body may have lodged just posterior to the ciliary processes or has become en-

tangled in them, thus eluding the search of the most careful operator.

The question now arises, what shall be done with such an eye? *It cannot be denied that the only safe procedure is to sacrifice the eye.* It is impossible after so much churning up of the vitreous for an eye ever to have useful vision. It will always be an eye dangerous to its fellow, and it is more than probable that it will have to be removed because of purulent ophthalmitis. If the patient insists upon an effort being made to save the eye, the surgeon should not consent to undertake the treatment of the case until after having fully explained to the patient and his friends the chances of failure and the danger to the fellow eye. The management of such a case should be along

the lines already laid down, iced cloths continuously applied and atropine every three hours.

We will now consider an eye in which a *foreign body is suspected but from which no attempt has been made to remove the offending substance.*

It is worse than useless to attempt to remove a foreign body from the posterior chamber of the eye which cannot be attracted to the magnet. There are but two things to do in such a case, either to sacrifice the eye or to temporize. A close watch should be kept on the fellow eye for sympathetic involvement, and at the first signs of it the offending eye should be removed. The temporizing method consists in the antiphlogistic and anodyne treatment already laid down.

CHAPTER XI.

Sympathetic Irritation and Sympathetic Inflammation.

Sympathetic Irritation is the forerunner of sympathetic inflammation. It is the danger signal for which every surgeon should be on the lookout. If it occurs during the first month after the injury its symptoms are of so short duration as to be more frequently overlooked than recognized. The greater the time that elapses before symptoms of sympathetic irritation become manifest the more prolonged they are.

Removal of the injured eye almost always stops sympathetic irritation of the fellow eye, otherwise the process goes on to sympathetic inflammation.

The first symptom of sympathetic irritation complained of by the patient is that his "good eye feels weak." It is

slightly sensitive to light and "waters easily." He finds upon trying to read that the "print blurs," and that he has to hold it a little farther away from him. These symptoms increase gradually until sympathetic inflammation sets in.

Sympathetic Inflammation. An eye containing a foreign body, or an eye extensively damaged, or an eye wounded in the ciliary region, is at no time, no matter how remote from the date of the original injury, free from the danger of causing sympathetic inflammation of its fellow eye.

I shall not attempt to go into the many theories of how sympathetic inflammation is induced. These theories

may be read in any standard work on ophthalmology; neither shall I go into the pathology of this disease further than to say that it is a plastic inflammation of the iris, ciliary body and choroid.

The symptoms are insidious. There is no pain; the eye becomes at first slightly injected in the circumcorneal region; the iris changes its color to a darker hue and has a muddy appearance due to a clouding of the aqueous in the anterior chamber; the power of accommodation, if the patient is not presbyopic, becomes lessened and finally lost; vision is lowered for distance—i. e., for reading from the test card at twenty feet; upon ophthalmoscopic examination it is found that the cornea is somewhat opaque from the deposit of plastic material upon its posterior surface, and the reflex from the pupil is indistinct from the clouding of the aqueous and vitreous humors. Atropine instilled into the eye has, except in the early stages, little or no action in dilating the pupil.

The *course and duration* of such a process is slow but sure toward complete loss of vision. The disease progresses steadily until the pupil becomes filled with plastic exudate, the lens opaque, the vitreous disorganized, and the retina detached. When the process has run its course it is because it has devitalized every membrane of the eye.

Treatment. First of all the injured eye which is causing the trouble should be removed. The exception to this rule is when the offending eye has a fair degree of vision and the case has not come for treatment until the fellow eye

is well advanced in the sympathetic inflammatory process. In such a case it is improbable that removal of the offending eye will stay the process in the sympathizing eye, and if it does not the patient is doomed to total blindness.

A hard and fast rule can be laid down to *remove all offending eyes that are sightless.*

The management of a case of sympathetic inflammation consists in the use of inunctions of blue ointment (Ung. Hydrarg.) one drachm daily; internally iodide of potassium in increasing doses, beginning with five grains and carrying it up to the limit of tolerance, then beginning again with the initial dose; pilocarpine sweats once daily. Dr. Harold Gifford* recommends 150 to 200 grains of sodium salicylate as the daily dose, to be continued so long as improvement of the disease continues, or until resolution is accomplished. He has had some very brilliant results from this treatment. Locally, hot applications ten minutes out of every two hours; atropine at first every five minutes for one-half hour, then every three hours; leeching from the temple and ocular side of nose to be repeated every second day.

The continuation of such heroic treatment must depend upon the judgment of the physician. If the eye improves, keep it up. If it does not improve after a fair trial, it is useless to continue it.

*"Notes on Sympathetic Ophthalmia," H. Gifford, *The Journal of the American Medical Association*, Vol. XXXIV, No. 6.

CHAPTER XII.

Enucleation of the Eye.

Within recent years other operations than enucleation have come into popularity. The object is to afford a good stump over which an artificial eye may be fitted; one that will afford good movement to the prothesis; one that will not leave a vacuum for the accumulation of secretion between it and the shell. The desired result is that the orbit shall be well filled out, thereby preventing epiphora and the unsightly appearance of recession of the eye.

These operations may be summed up as follows: First, Mules' operation, which consists in abscission of the cornea and evisceration of the entire contents of the sclera, and placing within the scleral cavity a glass ball. Over this ball the sclera is closed with silk sutures or catgut, and over the whole the conjunctiva is sutured in the opposite direction. Second, simple evisceration. This consists in proceeding as for Mules' operation without the use of the glass globe or suturing. The scleral walls are allowed to collapse and thus form a partial stump. Third, Adams Frost's operation. This consists in enucleating the eyeball out of Tennon's capsule and placing in the cavity made by the removal of the eyeball a glass globe such as is used by Mr.

Mules. The capsule and ocular muscles are drawn over the glass globe and sutured together, and over the whole the conjunctiva is finally sutured.

The operation of enucleation I shall not describe, as it is presumed that every surgeon knows how to perform it. It has held sway for so long and has given such satisfaction in the presence of sympathetic involvement of the fellow eye, that we have been loath to substitute for it any other procedure. We have had a sufficient number of intrepid ophthalmologists who have been brave enough to give these operations a trial even in the presence of sympathetic inflammation. They have demonstrated that these operations are attended with little or no more danger of sympathetic inflammation than is simple enucleation, and are indeed preventive of sympathetic inflammation.

The main objection to these substitutes for enucleation lies in the long healing process. This is often very important to miners who have families to support and do not especially care about a fine cosmetic result. I always explain to such patients the advantages cosmetically of Mules' operation, but find they usually choose the short route of enucleation.

CHAPTER XIII.

Injuries to the Orbit.

Penetrating wounds of the orbit, if not deep and not infected, do not demand other attention than simple

aseptic treatment, such as thorough cleansing, freeing the wound from all foreign matter and an aseptic dressing.

Deep penetrating wounds of the orbit causing fracture of the orbit or laceration of the third, fourth, sixth or optic nerves are of grave prognostic import, but since we must depend largely upon nature for the repair of the damage, we can do little beyond that recommended for a simple penetrating wound. The same may be said for fracture of the orbit. It is often recognized only because of paralysis of some of the eye muscles, or blindness resulting from injury to the optic nerve. The orbital bones are very thin and run back in pyramidal form, at the apex of which enter the third, fourth, sixth and optic nerves. Blows upon the supra-orbital margins are very liable to cause fracture of the orbit running to the apex. One or more of

the nerves mentioned are liable to injury from the fracture direct or from the pressure of a hemorrhage. The paralysis resulting may be partial or complete in proportion to the extent of the nerve involvement. The paralysis may gradually improve or remain permanent.

The treatment should be directed to the relief of the pressure upon the nerves; moderate doses of kali iodide should be administered in hopes of promoting absorption of a possible hemorrhage or exudate; galvanism should be applied to the eye muscles to keep them active in hopes of the function of the nerves being ultimately restored. Operative work here is useless and would no doubt do more harm than good.

CHAPTER XIV.

General Considerations.

When both eyes are seriously injured many of the foregoing rules must be broken. This is especially true as regards sympathetic inflammation, and the advisability of extensive operative intervention for the removal of foreign bodies from the vitreous. Here our endeavors should be to preserve or restore vision by such means as will bring about the desired result. Operative work that is imperatively demanded should be performed, otherwise palliative measures should be instituted until the eyes become quiet. Then it may be possible by operative means to improve vision in one or both eyes. When, by such means, it is possible to restore vision in only one eye, if the fellow eye is a dangerous eye, it is better to re-

move it.

Rest in Bed. All severe injuries to the eyes call for rest in bed and perfect quiet. If one eye only is injured, the patient should not be allowed to use the fellow eye. It is well, therefore, to cover it. The eyes both move together and receive the same nerve impulses, hence it is imperative that the uninjured eye be kept quiet in order to obtain rest of the injured eye.

Local and General Anesthesia. The eye is the most susceptible organ in the body to local anesthetics, but they have little action upon it when inflamed, hence, when the patient experiences much pain from an operative procedure, be prepared to give a general anesthetic. General anesthesia is to be recom-

mended whenever it is found that the eye cannot be rendered anesthetic by local means. It is impossible to do good work in the performance of a painful operation upon the eye when the patient is conscious.

I would recommend as a local anesthetic holocain in preference to all others, because it is antiseptic, and there is no reactionary dilatation of the blood vessels after its effects have passed off.

The Rational Treatment of Abortion in Country Practice.

By J. W. CLINE, M. D., GEORGETOWN, COLO.

In country practice we do not have at hand all of the conveniences that are supplied to the city practitioner. When confronted with a difficult operation we cannot step to the telephone and call an ambulance to transport our patient to a modern hospital, where there is at command all of the equipment and assistance that science can afford. More apt are we to be over the hills and far away at some little hut on the mountain side, where we are not only called upon to be physician, but often times must assume the responsibility of being our own anaesthetizer, exercise the duties of nurse, and possibly that of porter as well. It is here in the midst, as is so often the case, of uncleanly surroundings, and with a scarcity of even the essentials, in cases such as we have under discussion, that we must say, with Michael Angelo, "If we cannot realize our ideal, we must at least *idealize* our real."

By the term abortion, I mean the expulsion of the products of conception before the foetus is viable (Parvin), and I wish to speak especially of that stage of abortion sometimes termed foetal abortion, which occurs between the tenth week and the end of the fifth

month.

When abortion takes place during the first few weeks of pregnancy and the products of conception are expelled entire, the treatment is simple. Simply rest in bed for a few days with vaginal antiseptic douches is all that is usually required. Later than this, or whenever any portion of the membranes or decidua remains within the uterine cavity, more active treatment is required. Any portion of the conception, whether it be membranes, placenta or decidua, after being cut off from its blood supply, becomes dead flesh, a foreign matter; and if not extracted, is the rendezvous for septic infection.

We will suppose that we are called, perhaps several miles from our own town, to see a case, the exact nature of which we probably do not know. On our arrival we find, however, a woman three or four months pregnant, suffering from a threatened abortion; and on examination we find that the abortion is inevitable. She is flowing, perhaps profusely, and has occasional attacks of syncope. The question immediately arises, with such a condition, and under such circumstances, what is the best treatment for us to pursue. The books

*Read at the Colorado State Medical Society, June 19, 1900.

tell us that in order to stop the hemorrhage it is best to hastily clean out the uterus, and in order to do this, Lusk advises the use of the fingers or hand, and adds, that if the vagina is thoroughly disinfected, and the hands are surgically clean, the operation is absolutely devoid of danger. I have never yet seen a woman die from hemorrhage in case of abortion, but I have seen them die from infection, and infection I regard as "*maximum periculum*," against which we must guard in the treatment of these cases.

Not long since, a physician who commands a large practice, told me how he was called to a case such as just described, and that after driving several miles, upon reaching his destination, he hurried into the house and found his patient suffering such a profuse hemorrhage that he pulled off his gloves, and not stopping to wash his hands in any way whatever, immediately thrust them into the womb and delivered it of its contents. I do not believe that haste is ever so imperative, nor the advantages gained in this mode of treatment so great as to warrant such reckless disregard of the use of antiseptics.

The treatment that I pursue in my rural practice is as follows: Given such a case, three or four months pregnant, the abortion inevitable, hemorrhage profuse with possibly occasional spells of syncope, the patient is given a drachm of the fluid extract of ergot, and possibly a hypodermic injection of 1-20 grain of sulphate of strychnia. She is then lifted and placed crosswise of bed, buttocks brought to the edge with Kelley pad placed beneath, thighs

and legs flexed and feet placed on chairs that are stood beside the bed. The thighs are well separated and the pudenda washed with soap and water and strong bichloride solution. A bivalve speculum is now introduced, and the vagina freed of all clots and any of the products of conception that may be retained therein. It is then thoroughly swabbed and douched with a 1-2000 bichloride of mercury solution. Having gotten the vagina and cervix as thoroughly disinfected as possible, the vagina is now packed with strips of iodoform gauze, first in and about the cervix and then by filling well the vagina. The patient is now replaced in bed, ordered to have an occasional dose of ergot, and she can be safely left until the following day—twelve to fifteen hours—before any further steps are taken.

This mode of treatment offers three distinct advantages: First, if the cervix is not sufficiently dilated to allow the uterine contents to be extricated, the tampon serves to stimulate contractions, at the same time retaining clots and such of the products of conception as may be forced down into the cervix, and which tend to dilate the latter, thus avoiding any forcible or instrumental dilatation which always results in more or less injury to the soft parts and give foci for septic absorption. In the second place, should the patient have suffered a great loss of blood, it prevents any further loss and allows her time to strengthen before the more serious and painful operation of cleaning the uterus is performed. Third, and most important of all, is the fact that it gives the

operator time to properly prepare solutions, sterilized instruments and such apparatus as is necessary in the scientific treatment of cases of this kind, and by so doing he avoids the chance of introducing anything into the womb that is not thoroughly aseptic.

At my office and before visiting patient again, I have prepared a normal salt solution and a 1-8000 bichloride of mercury solution; these are put into sterilized, one-quart, fountain syringes. If the combination hot water bag and fountain syringe is used and the water put in while very hot, it may be placed in your grip and carried several miles, even in cold weather, and will be sufficiently warm for use, when you reach your destination. Instruments are boiled, wrapped in sterilized towels and placed in your grip with such other apparatus as is necessary. On visiting the patient, she is once more placed in the dorsal position as formerly described, a bivalve speculum introduced, packing removed and the vagina again thoroughly cleansed. The anterior lip of the cervix is now seized with a vulsellum forceps, while with the placental forceps you remove whatever products of the conceptions you may find in the vault of the vagina and cervix. You will usually find that by this time the foetus and portions at least of the membranes and placenta, if yet formed, are lying in the mouth of the cervix, ready to be extracted with little or no trouble, and the cervix, is found, almost without exception to be softened and dilated, so that the womb can be entered without forcible dilation. After removing the loose portions that

may be lying in the cervix, the placenta forceps are introduced into the womb and as much as possible of the remaining portions are seized and pulled away. Following this the placental curette is introduced and the remaining portions of the placenta and membranes are scraped out, after which a moderately sharp curette is used and the whole of the interior of the womb is carefully but thoroughly curetted. This latter step is especially designed to insure the entire removal of the decidua. Among all of my instruments and apparatus there is none that facilitates the performance of this work more than my four-inch head mirror. If a lamp is held over the patient's abdomen, or with daylight if she is so placed that a window is directly in front of the accoucheur, all the light that can be desired can be easily reflected into the vagina. Having now finished the curetting, the womb is douched with the 1-8000 bichloride of mercury solution, then thoroughly swabbed with Churchill's tincture of iodine, followed by a douching with normal salt solution. It is now lightly packed with strips of five per cent. iodoform gauze, a strip also placed in the vault of the vagina, and patient replaced in bed, given a drachm of ergot, and left for twenty-four hours, when the uterus is again douched, and a strip of gauze placed in the vault of the vagina. This is left for thirty-six hours, after which, especially if not convenient for the physician to see patient again, she is directed to remove it and have an antiseptic douche.

This treatment has required three

visits on the part of the physician, and it is usually not imperative at least that he should at this time give the case any further attention.

In support of this mode of treatment we can offer several arguments. First, referring to Lusk's advice of the use of the hands, I wish to say that at best I consider the hand a very clumsy instrument with which to clean the uterus. Not only is its introduction through the vagina exceedingly painful, and apt to do injury to the soft parts, but when the period of gestation is between three and five months the villi of the placenta lie so interwoven into the crypts of the decidua that with the use of the fingers it is impossible to do any better than to leave a ragged placental site, with portions of the placenta and decidua hanging to the uterine wall, which must be sloughed off and becomes a hotbed for septic infection.

By thoroughly curetting, not only the placenta but the decidua as well, is thoroughly removed, so there is no unnourished tissue left behind. And further, bacteriology tells us that it is practically almost impossible to completely disinfect the vagina; and though the hand may be ever so clean, yet when it is forced up through the vaginal tract, there is infinitely more danger of infecting the uterus than with the use of sterilized instruments.

In the detail of this treatment you will notice that I have said nothing about an anaesthetic, for the reason, however, that I very seldom find an anaesthetic necessary. Only in those cases where from neglect or other causes peritonitis or other forms of pelvic inflammation have set in, the parts

are sometimes rendered so sensitive that an anaesthetic must be employed; but in the great majority of cases an anaesthetic is not only unnecessary, but where there has been any considerable amount of hemorrhage I consider, for several reasons which I will not enumerate, that the employment of an anaesthetic is entirely unjustifiable. Indeed, I have, on more than one occasion, in the absence of sufficient or proper assistance, curetted the womb while the woman not only endured the operation, but at the same time retained a lamp by her side, with which I was enabled to see to operate.

In regard to the results of this mode of treatment, I have but to say that when I was the first physician called to the case, I have, as yet, my first patient to lose in a case of abortion.

PLAGUE SAID TO BE PUT-UP JOB.

The wildness of the claims to which some men are willing to subscribe is well shown by the following interview which appeared in the *Denver Evening Post*:

"It's politics, every bit of it," said George F. Chevalie, merchant, of San Francisco, to a man he had just met at the Brown Palace Hotel this morning. "I've been right there all the time, and I know what I am talking about," he continued.

"You see, there was nothing back of this scare until the board of supervisors cut down the appropriation for the health department, and then the doctors began to scheme to get even; but

they went too far with it, and I think that they themselves realize it.

"The plague they discovered is no different from the disease that has always killed off Chinamen. It is not the plague and it is not contagious. I don't know what the disease is exactly, but it's very easy to find germs in any disease. No, sir, the finding of the plague cases was simply retaliation on the part of the health officials. They took this means to pry up the supervisors and make them put up more money.

"The merchants, seeing how the plague talk was hurting business in the city, went to work and raised \$50,000 by private subscription and turned it over to the health officials."

"This was to pay the necessary expenses of the department, I suppose," the other man suggested.

"Oh, I don't know," said Mr. Chevalie. "I rather think it was to satisfy the doctors and make them let up on their backcapping."

"And how did it work?"

"Well, it worked all right as far as it was possible to make it work, but the doctors had overdone the thing and the scare had got beyond them. and now they are having lots of trouble to put it down. They know very well that there is no plague in San Francisco, but all the doctors have stood together on the proposition so long that they can't get back of it very well, and they are chock up against it. About all they can do now is to say that, though the plague was there, it's about stamped out."

SACRED RELIC OF SAINT ANNE.

Faith does not always have smooth sailing in the cure of the sick, as the following from New York, July 27th, shows:

"Human suffering and woe were pitifully shown at St. Jean Baptist Church yesterday. In the course of the day over 20,000 supplicants knelt before the altar and had the sacred relic of Saint Anne passed over their bodies. A score or more of the afflicted afterward said they had found relief from the beneficent saint. One young woman, Mary Kelly, of 680 Second avenue, came into the church on crutches, ailing from rheumatism. She left the church without the crutches and said she was cured. Another woman, Mrs. Miller of Brooklyn, suffering from heart disease and hardly able to walk, was able to leave the church unassisted."

1-1000 would hardly be considered a very favorable showing of cures in modern medicine or surgery.

UNLICENSED MEDICAL PRACTITIONER JAILED.

Dr. Preuss was found guilty of practicing without a license at Williams, Ariz., July 23. He had recently gone there from Los Angeles, Cal. He was called in to attend the ten months old child of Francisco Lucero, which had been sick for some time. The child died and Preuss was arrested. As Lucero would not appear against him, he was prosecuted for practicing without a license. He plead guilty, was fined \$100 and sentenced to 100 days' imprisonment.

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EDITORIALS.

CLINICAL LABORATORY WORK.

At the meeting of the Colorado State Medical Society of 1899 Dr. Charles A. Powers presented a paper in which he strongly advocated the establishment of a central laboratory of pathology, at which the members of the medical profession might have their work in clinical pathology done. In accordance with the recommendations of this article the subject was referred to a special committee consisting of Drs. Powers, chairman, Leonard Freeman, Edward Jackson, W. A. Jayne and W. B. Fenn for further consideration, a report to

be made at the next meeting of the Society. In a review of the Society's proceedings published in THE JOURNAL for November, 1899, "H." insinuated that probably no more certain and smoother scheme to secure the burial of the project could have been adopted. At the recent meeting of the Society the committee reported that in its judgment the establishment of such a laboratory was not at the present time feasible, thus apparently justifying the insinuation of "H." and at least remanding the project to a state of noxious desuetude for an indeterminate period

Both the paper and the report expanded upon the gratitude due the physicians upon whom the other members of the profession had been sponging so long for such work and dwelt at length upon the crying necessity for it. They did not say much, however, about its being actively demanded. The following considerations would seem to prove conclusively that no such demand exists here at least, and that the medical profession in this part of the country is not sufficiently educated to the appreciation of its importance to feel its necessity.

The practical interest in this subject is but slight. Most physicians, if the subject is mentioned, are willing to concede that really more attention should be paid to it, and then calmly proceed to give it no further attention. Their interest is not even skin deep. This was most brilliantly shown at the last meeting of the State Medical Society. A committee was appointed to get up a laboratory exhibit. That the pathological part of the exhibit was not a total and ridiculous failure was not in any way due to the profession at large, our hospitals, or our educational institutions. The members of the profession were urgently requested (twice by editorials in *THE JOURNAL* and once by a letter sent by the chairman of the executive committee to each physician in the state) to aid by contribution. How did they show their interest? Not one dozen specimens of any kind were volunteered.

Again, the hospitals, to which we should look for good examples, set us but poor patterns in that respect, although their staffs are supposed to be composed of the most advanced representatives of the profession. In preparing the above mentioned exhibit it was found that not a single hospital in Denver has decent, not to say adequate, provision for post mortem and clinical pathological work. From but one of them could any specimens at all be obtained, and from that one only some half dozen that were in the least degree serviceable. There is really no excuse for the existence of this condition of affairs, for resident internes are very cheap here. The ruling market price for them is very low—simply board and lodging.

What use has the medical profession for clinical laboratory work any way? For just as much as they can get without paying for or asking their patients to pay somebody else for. They usually have their throat cases examined for the presence or absence of the diphtheria bacillus. Why? Because they can get that done by municipal or state boards of health *free, gratis*, without too much trouble for themselves, and because the public has been educated to expect it. In some localities they have the sputum examined for the tubercle bacillus by the same boards of health, and for the same reason. For other such work our progressive doctor not unusually goes to some confrere, generally younger and with less practice,

but who has been fool enough to expend time, energy and money in studying laboratory methods, and money in laboratory equipment, and says: "Doctor, you have a microscope and such things; won't you just examine this urinary sediment, or pus, or sputum, or this scraping from the uterus, and tell me what you think of it?" or: "Doctor, I have a patient whose blood I think would be very interesting to examine; wouldn't you like to do it?" Such requests are also usually accompanied by the statement: "I am sorry that I can't give you any fee for this, but it is a poor patient" (why not with a wife and fourteen children?), and also, just as usually, the selfsame doctor is not thinking of treating that patient for nothing. Not unusually he also says: "I could do it myself, but I haven't the microscope or the time." And this assertion is generally just as much of a lie as the other.

And the idiot of a young doctor does not ask how it happens that clinical laboratory work is so often necessary for poverty-stricken patients and so seldom for the well-to-do. No; he is tickled that the older man with the established practice should come to him, and he does the work in the vain hope that when an opportunity to show practical appreciation by calling him in consultation for a paying case it will be done. Alas, poor fool! That comes only when he has attained a position which commands influence and his practice is such that the other physi-

cians have learned that it is capable of furnishing them consultation pickings also. In the course of time he learns that physicians in general will not pay for clinical laboratory work themselves and are afraid to ask their patients to pay for it. Although it ought to be done, they would rather go without it and run the risk of making incompetent or incorrect diagnoses. They close their moral eyes to the ethics of that method of doing work and the reasonable rights of the patient in that respect. What would they say, however, if that same young man were to come to them and say: "Doctor, you are older than I am and know more than I; will you just go over this patient's chest, or make this gynæcological or rectal examination for me and tell me what you think about it? I have no stethoscope, or speculum, and, any way, I have not had time to do it carefully myself." How long would it be before it would be suggested to him that an occasional fee would be acceptable, or that he would better get his instruments and *learn how to use them?* What right has the older man to expect the younger to thus do his work for him and bolster up his reputation among his patients gratis?

It is very probable that were one man to get all the remunerative private clinical pathological work done in the Rocky Mountain region (and the same holds true in other districts as well), and the pay were prompt, and he were dependent upon it for his existence, he

would soon be but a skeletal reminiscence. Doctors are very prone to complain of the burdens cast upon them in the way of unremunerated work. Let him among them who is without sin cast the first stone.

THE PLAGUE.

The matter of uncertainty which shrouds the possibility of the dreaded plague having a foothold in San Francisco has aroused more than a general medical interest.

The *Occidental Medical Times* affirms that the cultures of Dr. Kinyoun of the Marine Hospital Service are those of the *B. pestis*; also that those cultures made by Dr. Kellogg of the San Francisco Health Board from the glands of a suspect were typical of the pest germ.

Without consideration for these cultures or the veracity of the bacteriologists, the *Pacific Medical Journal* and the daily newspapers deny most positively the faintest suspicion of the existence of the plague in Chinatown, stating that "had it been the plague, more cases would still be developing," and assure the public that the deaths of the eleven suspected Chinamen were due to consumption or pneumonia.

So much interest has this denial excited that the New York *Herald* authorized Dr. George F. Shrady, of New York, to visit San Francisco and give his testimony as to the exact nature of this suspicious epidemic. So far as this newspaper enterprise was con-

cerned, it proved a miserable failure, as Dr. Shrady failed in any way to clear up the mystery.

The Chicago Board of Health received cultures from Dr. Kellogg, but refused to state their precise morphological characteristics, thus giving the question over to one of speculation. The bacteriologist of the Boston Health Board, Dr. Hill, on receipt of cultures from Dr. Kellogg, immediately grew a fresh stock, and, inoculating rats, had the satisfaction of proving the positive nature of the growths, as the autopsies demonstrated too clearly that death was due to the bacillus *pestis*. This agrees with Drs. Kinyoun, Geddings and Surgeon General Wyman, all having made the same report on the same cultures.

That there has existed plague in San Francisco is without doubt, but the clamor of newspapers and merchants has been potent enough to raise the "cordon" and have city declared pest free.

The public press, commenting on the action of Governor Gage, of California, in forwarding a negative reply to the anxious inquiries of Secretary Hay, states its political favor in the following: "The people will not be unmindful of the Governor's worth; were he made of such selfish stuff as certain doctors and politicians in San Francisco and elsewhere, our port would now be closed to the world at a loss of millions of dollars."

The exposure of citizens evidently is

not worthy of consideration, when the dollar is used as a monocle. Just a little more expansion, and we have a little more plague.

Colorado rejoices in two factors most potent protectors of her welfare. First, that Dr. Tyler refuses to lift the quarantine now in force against California; and, second, one thousand miles of territory still exists between the boundaries of the two states.

Too much stress cannot be placed on quarantine, as on it depends the lives of those within its precincts, and in view of the inability of the citizens to act in their own behalf, we heartily approve of the course of the State Board of Health, and hope it will continue to discreetly use its vested authority.

POPULAR EDUCATION.

Owing to the interest taken by the medical profession in the Public Schools we submit for criticism the questions below, which formed part of an examination for a teacher's third grade certificate. They were prepared by Helen H. Grenfell, Superintendent of Public Instruction, Denver, Colo.:

PHYSIOLOGY.

1. Name the divisions of the alimentary canal from above downward. Locate the stomach and describe the digestion that takes place there.

2. Name the orifice at the lower end of the stomach. Into what does it open? What name is given to the food when ready to leave the stomach? Its color?

3. What is the digestive fluid of the stomach? Where is it secreted? What digestive fluids act in the small intestine? Where is each secreted?

4-5. Describe the lacteals and the thoracic duct. Give the function (use) of each.

6. What is the name of the largest artery in the body, and why does it not have valves?

7. From what do the glands of the body derive their fluids?

8. Name the divisions of the brain. Name and describe that part of the brain which is supposed to be the seat of the mind.

9. What is the reflex action, and of what service or use to us in life?

10. Show how the sense of pain is a benefactor?

When the importance of instruction in the elements of hygiene and sanitation is considered and compared with the practical worthlessness of the appended questions, which are deemed sufficient for a teacher's certificate, we may well say that our high school pupils are burdened with unnecessary subjects.

These young people, upon receiving their certificates, are expected to be able to teach hygiene, yet never hear of the subject in the school in other than a cut and dried cram on so-called physiology, taught by a poorly prepared instructor.

The whole curriculum in this respect is a farce. Instruction in the essentials of practical living is overlooked, it

being taken for granted that the student is familiar with them by virtue of existence, or that the subject is not worthy of recognition by a pedagogue. As a result, hygiene is treated like the private in a colored company who was "relegated to the rear" for drinking plain water. Thus the manual requires a knowledge of physiology, deeming that subject to cover adequately the entire field of practical every-day sanitation, but avoids a semblance of in-

struction in sanitation or hygiene.

The demand is such that every student should receive some instruction in public health, and especially should those intending to teach be well versed in the principles of healthy living. It is to be hoped the school boards may be able to recognize their error, and make the study of hygiene a pleasure, dispensing with the labor imposed by "school physiology."

EXCHANGES.

Is Alcohol a Food?

The *Quarterly Journal of Inebriety* for July contains the reply of Dr. Winfield S. Hall, Professor of Physiology, Northwestern University Medical College, Chicago, Ill., to Professor W. O. Atwater's question, "Is Alcohol a Food?"

"About a half century ago Liebig, the 'father of physiological chemistry,' divided foods into three classes: (1) the 'plastic foods,' or those which may be built up into active muscle, gland or nerve tissue; (2) the 'respiratory foods,' or those which are oxidized in the blood to liberate the heat energy of the body. The first class of foods included the nitrogenous proteids, while the second included the non-nitrogenous carb-hydrates and fats. Liebig believed that the muscle tissues assimilated only the nitrogenous portion of

the food, and that with each muscular movement a portion of the muscular tissue would be broken down or decomposed. Such being the case, the nitrogenous excreta of the urine ought to be proportional to the mechanical muscular energy liberated in a given period.

"Among other theories which the father of physiological chemistry advanced was the one that alcohol is a food. He reasoned thus: All respiratory foods are oxidized in the body; therefore, alcohol is a respiratory food. Of course, the fallacy here is apparent.

"Let us unveil the fallacy. Under conditions of normal activity, a cell will catabolize a certain amount of matter drawn immediately from the cell-sap or from the living cell-substance itself. This matter is in part nitrogenous and in part non-nitrogenous.

"If we were to take into account

simply the balance of ingesta and egesta we might reason thus: (1) the addition of food to an animal in C, and N equilibrium leads to an accumulation of C and N in reserve, all other things remaining the same. (2) The addition of morphine to the food of an animal in C and N equilibrium leads to an accumulation of C and N in reserve, all other things remaining the same. (3) Therefore, morphine must be a food.

"The fallacy of this reasoning is apparent only when we take into consideration the vital process of the cell. Morphine depresses the activity of the cell, oxidation is decreased, less cell substance is decomposed, the amount of matter absorbed remaining the same, there must be an accumulation of C and N in the cell. Notice the difference between the two cases: With increased food the activity remains the same, or is increased, and the result is an accumulation of C and N, or greater activity with CO₂ and N excretion. With the influence of morphine, the activity is always decreased, and the excretion of C and N is always decreased.

"To demonstrate that alcohol 'spares carbonaceous and protein foods and tissues,' is simply to prove that it is narcotic in its effect upon cell activity, unless it can be demonstrated that the consumption of oxygen and the output of CO₂ are either normal or increased. But these gases are always decreased in their interchange after ingestion of

alcohol in even moderate quantities. Alcohol cannot then be a food; it is a narcotic."



Cancer and Cancerous Cachexia. *The American Medical Quarterly* contains a noteworthy article of

Dr. Roswell Park, A. M., M. D., on "The Nature of the Cancerous Process and the Cancerous Cachexia, and the Relation of Local Irritation to Each."

Over one hundred years ago, a great, but in this country almost forgotten surgeon, Peyrithe, voiced the following sentiment, which is just as true to-day as when he gave it expression: "*Ut cancerum curare, sic eum definire perarduum est*" (*Diss. de Cancro*, Toulouse, 1774). Every pathologist who studies the disease, and every surgeon who attacks it, will concede willingly that in order to cure cancer one ought to know the nature of the disease with which he has to deal; and every modern pathologist will also concede, I think, that ontology, with its kindred subject teratology, constitutes the most fascinating and important field for his labor.

When we deal with the matter and manner of growth of cancer we find that while in the minds of many karyokinesis undoubtedly plays a most important role, it is not the sole feature of interest in this connection. Even the abnormalities of mitosis, interesting as they may be, do not explain much of what we must appreciate in order to know in what the disease process con-

sists. Arnold (*Virchow's Archiv*, 1883-4) has called attention to the frequency with which may be noted what he calls fragmentation of these tumors, which consists in a more or less regular division and segmentation into small masses or nodules, either with or without multiplication of tumor elements. Aoyama (*Virchow's Archiv*, 1886) has maintained that these are post mortem changes, since the figures and changes described by Arnold may be seen in various inflammatory conditions.

Another phenomenon observed by many to which Klebs and others have attached considerable importance, is that of leucocytic inclusions, *i. e.*, the penetration of leucocytes into the interior of the neoplastic cells. This, of course, is a common phenomenon in the infectious granulomata, and receives there a commonly accepted interpretation. No matter what importance there may be attached to it by others, it would seem to me that in a case of malignant tumor leucocytic invasion is equivalent to phagocytic, and can be viewed only in one light, *i. e.*, as an effort at protection against invading organisms. The fact that the dead leucocytes are so often found in the tumor mass does not detract at all from the importance of such an explanation.

Kauffman has seen cancer conveyed to the eyelid from the globe of the eye, and Fenwick has noted its transmission from one surface to another in the bladder. Constant and immediate contact is not always necessary for this

purpose, as such lesions about the lip and tongue demonstrate. Further illustrations of this kind of transmission are seen in cancer of the stomach, produced by swallowing cancerous vegetations from the esophagus, of which cases have been reported by Cornil, Klebs and Luecke, as well as by Menetrier. Cancer of the esophagus penetrating the trachea has also produced lesions in the lung by the same kind of mechanical transmission, while Schimmelbusch has reported cancerous infection of the lip through the finger-nails of the individual who was handling his cancerous ear. The very great importance to be attached to cancerous involvement of the track of an instrument cannot be overestimated. This has occurred numerous times after tapping the abdomen in cases of ascites due to cancer and in other parts of the body after various other kinds of instrumentation. Moreover, the cancerous elements when introduced into serous fluids seem to find there conditions favorable for their reduplication. Other instances, to which I have already called attention in previous papers, of unfortunate transmission of cancer from one part to another of the human body, by the surgeon, might also be added, such as the case reported by Claude and Pilliet, where the result followed an autoplasmic operation.

In this way I have laid stress upon the predominance of cancer in various parts of the body as a consequence of preceding irritation, such as may be

caused by tobacco, disturbed salivation, burns, frostbites, constant slight traumatism, ulcerated epiblastic inflammatory lesions, syphilis, warts, ichthyosis, etc. The frequency of cancer of the tongue after psoriasis is universally acknowledged, occurring, according to Debove's observations (*These de Paris*, 1873), 24 times out of 25 in men, a process quite similar to Paget's disease of the nipple. Moreover, isolated observations in this same general direction all have their own particular value; as, for instance, that of Helferich (*Deutsche med. Woch.*, 1890), who saw cancer of the lip in a fisherman who constantly held some of his instruments in his mouth, and Hulke (*Med. Times and Gaz.*, 1893, who saw cancer in the palate following a local traumatism; or Kronacher, who observed the same thing after injury inflicted by a dentist; while all of us, dentists as well as surgeons, well know the frequency of cancer in the mouth as a result of an irritation produced by diseased or jagged teeth or by collections of tartar.

The cancerous dyscrasia so universally noted in cancer patients is quite analogous to the dyscrasias which predispose to other infections, and is a favoring cause rather than an unfortunate effect, since it precedes rather than follows many of these diseases. Even if one feels impelled to side with those pathologists who believe in the ineffectivity of epithelial cells, *per se*, we must still acknowledge a susceptibility of certain tissues to their invasion. This

cancerous dyscrasia is without classic symptoms, and, in fact, cannot be as yet recognized, as one can recognize, for instance, the dyscrasia which predisposes to tubercle; and above all things it must not be confounded with the cancerous cachexia which, of course, is the result of the presence of the growth. The one is the forerunner, the other a consequence, and the two should never be confused.

Bard attributes the cancerous cachexia to the absorption of the products elaborated by the cells of the tumors, which, according to him, amount practically to excess of only glandular secretion. Thus, he would describe the gastric cachexia, the pancreatic, etc. This theory is attractive in certain aspects, and yet probably has but little to sustain it.

"This condition, which is the ordinary cause of death in cancer, unless one of the great vital organs be seriously involved, or an artery eaten across, was for long a great puzzle, until it dawned upon us that the cancer-cell masses, having no ducts or proper excretory channels, were pouring their abundant waste products into the blood and lymph, thus poisoning the entire body, precisely as those vegetable parasites, the bacteria, do with their secretions or toxins."—Hutchinson.

Truth is, in all probability, that the cancerous cachexia is a complex product of numerous factors, including degenerative products both of the neoplastic cells and of perturbed action of

normal cells, and of those accidental disturbances of important organs which may be the result of mechanical obstruction; as, for instance, pressure upon the biliary passages in cancer of the pancreas, pressure upon the ureters in cancer of the uterus, etc. Moreover, we must not lose sight of the anemia

consequent upon hemorrhages or disturbed nutrition, and of the secondary infections, mostly septic, which are likely when the growths are near or upon the surface, including the absorption of ptomaines, etc., under whose constant influence visceral degenerations may easily occur.

NEWS ITEMS.

THE PLAGUE IN LONDON.

The Marine Hospital service has received the following telegram from Past Assistant Surgeon Thomas, announcing the outbreak of the bubonic plague in London:

"LONDON, August 3.—Surgeon General, Marine Hospital, Washington: There have been four cases of plague and two deaths from plague in London. Diagnosis confirmed by bacteriological examination. Do not think there will be further spread. THOMAS."

The dispatch from Surgeon Thomas gives no details as to the origin of the cases nor whether they were on ship-board or within the city itself. The Marine Hospital service authorities say the instructions already given to quarantine officers are ample, and they express confidence that the disease is not likely to reach this country. At the same time, the possibility of danger is not overlooked, and quarantine officers will be especially watchful in the enforcement of the regulations.

WILL MAINTAIN QUARANTINE.

Colorado will maintain her quarantine against Japanese as well as Chinese from San Francisco on account of the bubonic plague there, notwithstanding the belief of the Japanese Minister at Washington that the state has no right to do so.

Every effort is being made by the San Francisco authorities to suppress all news of the dread disease and to convey abroad an impression that the plague has vanished, but it is a fact that another living case has been discovered there within the past few weeks.

The plague, moreover, is not wholly confined to San Francisco, but has extended to other towns in California.

It is a menace to adjoining states, and to the Union, and quarantine restrictions and precautions are absolutely necessary, Dr. Tyler holds. Recently local health officials in San Francisco made an inspection of the Chinese quarter in search of evidence of the

plague's presence. They not only found no trace of the plague, but could discover no illness whatever. The Chinese, forewarned, had hidden effectively every sick man, woman or child in their whole district.

As there are about 35,000 inhabitants in the Chinese quarter, there must of necessity be a number of sick people, with ordinary complaints, yet not one could be discovered by the inspectors.

Many of the best physicians in San Francisco are convinced that in addition to the thirteen or fourteen cases of bubonic plague discovered during the past few months, there are many others which have not been reported. They fear a serious outbreak of the plague within the next few weeks, and advise Colorado to enforce her quarantine with unyielding rigidity.

STATE HEALTH BOARD SUPERIOR TO LOCAL BOARDS.

After an unpleasant contest between the State and City Board of Health of

Denver, which lasted since June 7, and which threatened to culminate in spirited litigation over the question as to whether the State Board had authority to demand from the City Board reports of all contagious diseases, the latter announced, July 30, that the State Board was vested with such a prerogative by law. The reports which have been withheld since June 7 will therefore be sent in to the State Board with due regularity hereafter.

In view of the fact that the statute vests the State Board with authority to suppress contagious diseases by quarantine, and in view of the fact that the district attorney had threatened a suit for a penalty under the statute, it was deemed wise to acknowledge the supreme authority of the state officials.

The Denver Health Department has discharged its milk inspector and meat inspector, and closed the Steele Hospital for Infectious Diseases, for lack of funds.

BOOK REVIEWS.

ULCER OF THE STOMACH AND DUODENUM AND ITS CONSEQUENCES. By Samuel Fenwick, M. D., F. R. C. P., and W. Soltan Fenwick, M. D., Lond., M. R. C. P. Philadelphia. P. Blackiston's Son & Co., 1012 Walnut St.; 1900. \$3.50.

The subject of ulcer of the stomach is destined to pursue a literary career similar to that of appendicitis. We must know more of its etiology and pathology in order to be able to recog-

nize the disease and cope with it. The writer has pointed out elsewhere* the points of resemblance between gastric ulcer and appendicitis from a clinical point of view, and the publication of this valuable monograph by a father and son who have for years contributed liberally to the science of gastrology marks the beginning of the literary era

* Transactions Colo. State Med. Association, 1900.

of gastric ulcer. This contribution is certainly by far the most important mode during the last decade. The authors have not only gathered the vast material already in existence, classified, arranged, digested, and presented the conclusions in a most readable form, but they have also contributed from their rich store of observation. Every page of the monograph, of some four hundred pages, bears the stamp of originality. Whenever experiment could throw light upon the morbid anatomy or pathogenesis the authors performed them and the results proved instructive. The conical shape of the ulcer required two experiments (pages 19 and 20) which beautifully demonstrated that "the gastric juice, while it dissolves that portion of the muscular tissue immediately opposed to it, irritates the fibres at the circumference, and hence each successive film of muscle tends to contract and thus to minimize the extent of its injury. In this manner the actual area of tissue offered to the solvent action of the gastric juice becomes progressively smaller, until by the time the peritoneum is invaded the possible damage to its structure is comparatively insignificant." In order to demonstrate that Muller's theory of venous obstruction as a causative factor of gastric ulcer is not tenable, seven experiments have been performed by the authors. The clinical histories of eighty-two cases help to impress upon the reader a good many valuable points in the diagnosis and treatment of acute and chronic ulcer of the stomach and

duodenem, perigastric adhesions, results of cicatrization, hyper-secretion and gastric catarrh, tetany and the sequelae of chronic gastric ulcer. Chronic gastric ulcer has received due consideration for the first time, and the authors devoted to it a separate chapter, an innovation which the future writers of text books will have to adhere to. Of the twenty-four tables, some fifteen are of great diagnostic value, and original with the authors. The fifty-five illustrations are all original and helpful. The bibliography takes up some fifteen pages, but we regret to say it is not complete, since it covers only the important works in German, French and English, and does not contain a single reference to Russian, Italian and Spanish.

C. D. SPIVAK.

FOOD FOR THE SICK AND HOW TO PREPARE IT; WITH A CHAPTER ON FOOD FOR THE BABY. By Edwin Charles French, M. D. Price \$1.00. John P. Morton & Co., Publishers, Louisville, Ky.

This is a handy little volume of 156 pages and index. There is given first a series of diet lists for various diseases, occupying 46 pages. In these is given first a general idea of the condition under consideration; then a general rule for feeding, followed by a list of all the foods allowed and those not allowed. The bulk of the rest of the work is occupied with directions for the method of preparation of the most varied and a very copious assortment of dishes for the sick, especially such as are not to be found in the ordinary cook books. The instructions are so clear that they cannot be misunderstood. The work will be a valuable one for both nurse and physician.

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ORIGINAL COMMUNICATIONS.

Some Neurological Medico-Legal Experiences and Reflections.*

BY CHARLES K. MILLS, M. D., PHILADELPHIA, PA.

When, through its president and the chairman of its Executive Committee, I received the invitation to address this Society, I felt highly complimented by the request, which awoke anew in me the desire I have long had to visit the great West. The welcome given to the American Medical Association by its Rocky Mountain constituents and friends in 1898 will never be forgotten by those who were the recipients of this hospitality, and I have since felt that I not only lost the opportunity of taking part in profitable scientific work, but also was the loser in not then meeting the broad-spirited medical men of this section. I am glad to be here to-day; nor do I feel that I am entirely in a strange land, for, although I have never before breathed the pure air of these lofty mountains, around me are former students and colleagues, and I meet on every hand with cordial greetings from those known to me by correspondence, by books, or through the medical press.

Wishing to choose a subject that might be acceptable to all members of this society and believing that neurology and psychiatry in their relations to the law might be such, I have concluded to direct attention to some matters of medico-legal interest. During twenty years I have with increasing frequency gone into courts of law and before examiners, masters or commissioners, or I have given opinions or taken part in conferences with a view of settling litigation cases.

These experiences with the law have been chiefly in insanity cases, will cases involving the question of incompetency or undue influence, and in suits for damages for alleged injury to the nervous system. The cases in which insanity has been the chief issue have represented many different procedures, as those in which the plea of insanity has been made the basis of defence in trials for homicide, habeas corpus proceedings, cases in which insanity has been plead as a bar to divorce proceedings,

*An address delivered before the Colorado State Medical Society, June 20, 1900.

cases in which insanity has been alleged and eccentricity has been the defence, cases in which criminal and civil suits have been brought against physicians who have signed certificates of insanity, cases in which insanity of one party at the time of marriage has been alleged with the view of annulling the contract of marriage, and occasionally cases of a very special character, as one in which a son, in answer to an application to have him dismissed as an executor of an estate, alleged the insanity of his mother. Besides will cases I have also taken part in many in which incompetency to perform other legal acts has been averred. In addition to a large number of cases of the so-called traumatic neuroses, including hysteria, the damages cases have ranged from instances of serious injury to the skull and brain, or to the spinal column and its contents, to cases of restricted or trivial injuries to deep-seated or superficial nerves. Mental affections, exophthalmic goitre, chronic degenerative diseases of the neuraxis, and inflammations of the great nerve plexuses have been included in the list.

It would be manifestly unwise for the purposes of a single address to draw too largely upon this experience, and I shall therefore confine myself to a few lines of discussion, as to the effect and value of expert testimony, the causes of its failure and success, the abuses of expert testimony, official expertism, the most important lessons to be drawn from damage cases, and rules for the guidance of medical witnesses.

I have had many unusual medico-legal experiences, and might spend

the time allotted to these remarks in relating some of them, but to do this at length would prevent the carrying out of my chief design, which is to consider, mainly in a reminiscent way, the few above-mentioned questions in medical jurisprudence in which so much discussion has centered. It may not, however, be a waste of time to call attention, by way of introduction, to two or three unusual cases.

In 1892 I was called to one of the counties in the interior of the state of Pennsylvania as a medical witness for the prosecution in an alleged poisoning case. A young married woman died with symptoms which pointed to poisoning by her husband. A chemical expert having found strychnine in her stomach, her husband was put on trial. During the course of the trial the defence attempted to show that the woman had not died as the result of the administration of strychnine, but of morphine poisoning, or of uremia, or of tetanus, or of epilepsy, or finally that she had not died at all as the result of disease or the administration of poison, but had been killed by the doctor who made the autopsy on her five hours and a half after her supposed death, she being at the time in a state of trance or catalepsy. This five-barrelled defence proved effective. The trial lasted two weeks and the jury brought in a verdict of not guilty. I was employed by the prosecution chiefly for one purpose, that of disproving the allegation that the woman was in a state of trance or catalepsy, and not dead at the time when the physician made the autopsy. No real evidence was brought forward

to prove that death had not taken place, but the theory, absurd as it was, strengthened the hands of the defence.

During this trial one of the tricks sometimes played on medical experts was resorted to by the defence. The attorney had before him an open book, from which he read a rather lengthy extract on catalepsy. This seemed to have a familiar sound. He then asked whether what was there stated was true. I replied in the affirmative. When he further asked whether the statements in this book were not in contradiction to my evidence, I suggested that he read on, which he declined to do, but of which suggestion the counsel for the prosecution later took advantage. He had read from one of my own articles, hoping to make my published views appear contradictory to my testimony, having ingeniously picked out just that portion of the article which suited his purpose.

The witness should be careful in giving his views regarding books used by the examining attorney. A story is told of one of my friends who seems to have been led into a trap in this way. The lawyer held in his hands a sheep-skin volume, the title of which was readily seen. He then read a long passage, and asked the medical witness what he thought of the sentiments thus expressed, also whether he was familiar with the quotation and the book. The witness replied that the views were correct, that he was familiar with them and the book, which he had read from beginning to end. The attorney then removed some inserted pages and showed that what he had read was not

a part of the book. He had played the trick to show that the witness was untrustworthy.

Time will permit me to refer to only one other unique experience, or rather series of experiences, relating to a degenerate woman. She was the central figure in a train of events which might have furnished the material for more than one sensational romance of the morbid type. Some years since I was first asked by her father, through his physician, to see this young woman, then in a Magdalen Hospital. Her history seemed to clearly indicate that she belonged to the class of so-called moral lunatics, but I declined to join in a certificate of insanity in her case, not because I believed that she was mentally sound, but because I felt that she would not be detained in any hospital for the insane after certification. The woman would have made a favorable impression as regards her sanity if in habeas corpus proceedings she had been put upon the stand as a witness. Not long after this she turned the tables on her aged parent by attempting to show that he was a lunatic and not competent to execute a deed of trust. The proceedings which followed illustrate that medicine is not the only profession in which disagreements occur. They presented the spectacle of a series of changing decisions, beginning with the finding by the jury that the man was a lunatic. Next came the reversal of the finding by the commissioner before whom the case was heard, then the reaffirming of the jury's verdict by the judges of the lower court, and finally the reversal of this reaffirmation and the

upholding of the commissioner by the supreme court. In the end, from the legal standpoint, the man remained sane. My testimony was to the effect that the man was eccentric but not insane.

Time went on, and the young woman who had instituted these proceedings inveigled a young man who was possessed of a larger inheritance in money and real estate than in mental capacity, into marrying her. Proceedings were instituted to annul the marriage on the ground that the youth was feeble-minded or imbecile. I was called upon to examine him and, if possible, to testify that he had sense enough to know what he was doing when he had gone into this matrimonial venture, but the case was too much for me, and with another physician I declined to testify to his sanity and competency to make a marriage contract. This case is only one of a number in which I have felt it my duty to decline to give my services in the interests of the party first asking for them. It is too often said that any opinion desired can be obtained for money from a medical expert. The young woman eventually gave up the husband for a comfortable settlement in money and real estate. But this woman's Illiad had still another chapter. Later, but not long after this adjustment, the young woman married an unsophisticated farmer, who, one day, finding his burdens too great to bear, killed her, again causing her case, if not herself, to be brought into court.

Even this and other more remarkable experiences have been outdone by the West. Although I have had cases

in which electricity has in some way played a part, I have never had one quite equal to a St. Louis case reported some years since. A watchman followed by his dog passed near a spot where a live wire had broken and fallen to the ground. The dog treading upon this wire received a shock, which caused him to spring forward and seize and mutilate his master's leg, the incident being witnessed by an agent of the electric company who had been placed there to warn passers-by, and who afterward of necessity became a witness for the plaintiff. The watchman sued the company for damages inflicted upon his person by his own dog on the ground that the animal had been actuated to the commission of this ungrateful and treacherous act by the electric shock the dog being otherwise a peaceful animal, and especially well disposed to his master.

This case and all my own cases are, however, left in the shade by another Western case which came up in connection with one of the numerous tent shows which traverse all parts of our country. Among the attractions of one of these travelling exhibitions was a creature said to be of a higher form of animal life than a monkey and of a lower form than a man, being advertised as the missing link. Great stress was laid upon the fact that no one could say whether the creature belonged to the human or the brute creation. In a scuffle the showman dealt the missing link a hard blow over the ear, from the effects of which the animal died in a few hours. The local authorities ar-

rested the man for murder and at the preliminary hearing his lawyers set up the defence that their client did not take the life of a human being. I have not heard the outcome of this case.

While a further recital of cases of the remarkable sort might easily fill out the hour, it will serve a better purpose to now take up the consideration of a few of the medico-legal questions which seem to have an abiding interest to the professions, both of medicine and of law, illustrating the points taken and conclusions reached by frequent references to personal experience.

In the first place, let us consider briefly the value of expert testimony and the reasons for its failure or success. What is the effect of such testimony, and why does it sometimes fail when it should succeed, and sometimes succeed when it should fail?

Between sixteen and seventeen years ago I was a witness in a case which at the time attracted widespread interest. A man bearing one of the most honored names in the country was a sufferer from paranoia. He had on several occasions been a certified inmate of institutions for the insane. He had at times shown dangerous tendencies as the result of what he believed to be his persecutions. In a pamphlet printed in his own defence he stated that he more or less constantly heard hostile voices which he was convinced came from his persecutors.

Having been at liberty for some time, and showing evidences of delusion and excitement, he was certified to a well-known hospital for the insane. While there he was again adjudged insane by

the findings of an inquisition, the inquiry having been made on petition of those who believed that he should not only be restrained of his personal liberty, but that he should be under interdiction as regards his estate and affairs. He employed distinguished counsel and traversed the findings of the inquisition before a jury of twelve of his peers. Five physicians, all men of good standing and some of eminence, testified to his insanity. No physician could be found who would come into court and say that the man was sane, the only opposing medical testimony being that of a rural horse doctor. One well known neurologist who was asked to testify in favor of the man's sanity said it would be impossible to do so, but said that the case could be easily won by abusing the doctors and disregarding as far as possible the real question at issue. Eloquent speeches were made by the counsel on both sides, and one of the attorneys for the traverser in the course of the address read in a dramatic manner the printed pamphlet written by the alleged lunatic in his own defence, more than once bringing tears to the eyes of judge, jurymen and spectators.

In less than fifteen minutes from the time of leaving the court room the jury returned declaring that the traverser was not a lunatic, was capable of managing his own affairs, and was not a dangerous man to be at large. After a short but vain effort to live at peace in the outside world, the man returned voluntarily to the hospital from which he was released by the verdict of the jury, and from that day to this he has

been a voluntary inmate of some institution where the insane are cared for and treated. This case made a powerful impression upon me, and first led me to think over the real value of expert testimony, and to ask myself the reasons for its frequent failure, when from the scientific and even the humane standpoint it should have succeeded.

In a number of cases in which insanity was the issue, and in which the scientific evidence of its existence was overwhelming, verdicts against the evidence were promptly rendered by the jury. In two of the cases referred to the testimony was practically unopposed. In one autopsy showed the presence of extensive organic disease of the brain; in others were many signs of arrested and aberrant cerebral development. In another set of cases the juries promptly agreed with the experts, favoring the plea of insanity, although in one or two of these their testimony was meagre, and in one was of the flimsiest character. In still another set in which the accused were women, the court did not allow the cases to go to the jury, the fact of insanity being taken for granted without much real evidence. Finally, in still another group verdicts of the second degree or of man-slaughter were obtained, although in these from the standpoint of law it was clear that either verdicts of murder in the first degree or an acquittal on the ground of insanity should have been rendered. In these cases the juries apparently compromised between their inclinations to render a verdict in accordance with the evidence, and a desire not to be held responsible on the

one hand for the carrying out of the extreme rigor of the law, or on the other for allowing the accused to escape unpunished.

What is the true explanation of the apparent miscarriage of justice in some of these cases, the miscarriage of science in others, and still others of both justice and science? Of what value is expert testimony, it is said, if it meets with so little favor from courts and juries, and if antagonistic views are so easily obtained by attorneys?

The reasons for disregarding expert witnesses in such cases are to be found by considering the ideas and principles which actuate the vast majority of those who live in the community where such verdicts are rendered. In nearly all the cases the verdicts found favor with the community at large, and this irrespective of the strength or weakness of the scientific testimony adduced. When Guiteau struck down a president no array of experts testifying in the most convincing terms to insanity would have changed the verdict. Streams do not rise above their sources. Courts and juries are but the outcome as well as the representatives of the communities which give them authority. He who is capable of making a pathetic plea in his own behalf to be freed from the shackles of others, appeals with success to a love of liberty which is universal, and experts are swept aside by a current which cannot be stemmed. That spirit of vengeance which is sometimes just and always existent, and the almost universal abhorrence of cowardice and brutality so far

overshadow the knowledge and respect which the community has for science, that no amount of evidence given by the ablest witnesses is sufficient to overcome the fixed purpose of society to punish the evildoer. The law, or rather the jury in collusion with the law, must furnish some way of escape for the youth who strikes down the traducer of his sister and slayer of his father, even if this be through a verdict of insanity. Whom society wishes to hang it will find a way to hang, and whom it wishes to save it will find a way to save.

Expert testimony when it is based upon truth has a real value, even when it apparently fails of success in connection with the particular issue for which it is employed. It is one of the means of slowly educating the community at large to a better appreciation of science in its relations to the interests of humanity. Even when the feelings of the community have been clearly in opposition to the views of expert witnesses in cases of great popular interest, the respect for such witnesses is not lost. The community, like the jury, sometimes says, We cannot agree with what is said for reasons of our own; nevertheless it may be true, and at least is worthy of respect.

The hope for the future lies in the possibility of elevating the tone of the people so that they gradually come to a better understanding of matters with which experts deal. Slow as has been our progress in law as applied to medicine, and in medicine as applied to law, we have at least risen above the dicta of Sir Matthew Hale, and of the courts when Erskin was an advocate.

Those most disturbed about expert testimony have occupied themselves with schemes for the reform of its abuses, the plan usually suggested being the appointment of official experts. Sometimes they would have the physician sit as the friend of the court, testifying neither for the prosecution nor the defence, neither for the plaintiff nor the defendant; or they would take the cases out of the hands of juries and have them passed on only by the court; or they would have juries composed of medical men, scientists, professional experts, or specialists of some sort.

Such plans have a special allurements just after one has had his self-esteem sorely tried by a verdict against his evidence. He then begins to cry out for something better than our Anglo-Saxon methods.

In France the court may order an investigation and report by experts whenever it deems it advisable. Parties to the issue can agree upon experts, but if they do not the court appoints. In Germany parties may agree upon experts and the court may appoint these, or the court submits experts, a certain number of whom may be objected to, the court may appoint those who remain. A class of official experts on special subjects exists in Germany, and this class usually has the preference in appointment. Both in France and Germany the court may or may not adopt the conclusions of these official experts.

Can any one doubt that abuses often greater than those under our own system should occur under such officialism? To suppose that injustice is not

done is to suppose that those who administer justice under such laws are irreproachable. So far as methods of court procedure are concerned, the published details of the Dreyfus trial were sufficient to convince any dissatisfied American or Englishman that some foreign methods may be worse than his own.

I am opposed to official experts and to every law or proposed law, a draft of which I have seen, regarding expert testimony; and my first reason for this opposition is a basic one. The plans suggested "contravene one and all of the three fundamental ideas of our system of criminal trial, to wit, that the judge alone is to be the judge of the law, that the jury alone are to pass on the facts, and that the accused shall be allowed to produce any relevant and competent evidence in his own behalf." —(Godkin.)

No system of official experts will ever succeed in this country. Even the "Leeds system," as it is sometimes called because it has had its largest adoption in Leeds, England, is not always to be advised. Physicians who are engaged in expert work would, I believe, gladly avail themselves of this method, which is the one advocated by Sir James Fitzjames Stephens, but lawyers and litigants will stand in the way of its general adoption, and it is possible that it may not in some cases best serve the ends of justice.

The gist of the system is that medical men shall refuse to testify unless those called on both sides and by all parties shall have had the opportunity

to consult beforehand with regard to the case at issue. One of the results is that in Leeds the spectacle is seldom seen of physicians giving opposing and therefore conflicting testimony, and hence it is said that the medical profession has a more elevated position in that community. Is this reasoning sound? The correct answer to this query is to be found not in what is reputed to be its effect in a certain community during a more or less limited time, but it is to be sought for in a consideration of all the possible good and evil effects which may result from such a method. When physicians consult with regard to disease or injury in cases in which no litigation is possible, the consultants agree as to the conditions present; or they disagree; or through argument, persuasion, coercion or reasons of policy, after first disagreeing they come to an agreement or an apparent agreement. One of the chief arguments in favor of consultants announcing an agreement is the maintenance of the respect of the medical profession in the eyes of those who receive their opinion. Real agreement, however, is sometimes impossible; doctors cannot, any more than lawyers, judges and engineers, always come to the same conclusion. When such honest differences of opinion exist it is manifestly just that a disagreement should be acknowledged.

Let the physicians who are called by the litigants on both sides make their examinations together, and consult about the alleged disease, injury, or is-

sue, but let this be done frankly and freely, and without any effort to come to an agreement for the mere sake of doing this. Otherwise it is better to have no conferences, allowing each expert to state the results of his own observations.

After all, the present system is the best, but it does not follow that it is always made use of in the best manner. What is needed is that the medical experts shall be of the highest order as regards intelligence, training and honesty of purpose; that the study of the matters at issue and the examinations of the persons in interest shall be always of the most thorough and careful kind; that every opportunity to criticise the opinions formed shall be given, and that this shall be done in the light of open day. Where better can this be done than in a court of law?

Recently in Pennsylvania an act relative to expert or opinion testimony has been proposed, and is to be found in the report of the Committee on Law Reform to the Pennsylvania Bar Association, 1899. It is, I believe, intended to present this report or some modification of it to the next meeting of the Pennsylvania State Legislature. Copies of the act have been sent to a number of the medical societies of Philadelphia and Pennsylvania, and also to individuals especially interested in expert work. The law is in many respects as good as could be framed for the purpose, but the impossibility under our present system of jurisprudence of framing any statute that will properly cover the subject and control abuses is evident from a careful reading of this proposed act.

As the provisions of such an act might be unconstitutional if made obligatory, the first matter that attracts attention is the fact that the parties need not accept the opportunity to have official experts appointed. It is manifest that this would not be done if either side believed that its interests might be jeopardized by giving up the constitutional right to such expert assistance as might be obtained from any source. It does not follow, as inferred by the act, because certain persons having expert knowledge had been approached by parties to the suit, that they should be excluded as witnesses; nor would the expression of an opinion on the part of those having special knowledge of the subject render them unfit to serve in the capacity of expert, presuming in their honesty of character and purpose.

One section provides that no hypothetical question shall be asked of the official or other expert, and yet subsequently provides for a sort of hypothetical statement. The expert is expected to give his opinion when he does not base it upon his own knowledge of facts of which he has previously testified, upon agreed or undisputed facts, upon the entire consistent testimony of a party or witness, or by a statement upon one aspect and then another aspect of the case, etc. It is out of just such material as this that proper hypothetical questions are framed.

Some of the provisions of this section are worthy of commendation, as when it is stated that the witness shall not be called upon for an opinion unless he believes that what is submitted to him is sufficient for the purpose, and

when it is asserted that he shall in no instance be compelled to answer merely yes or no, if in his judgment such answer would mislead or would state only part of the truth; but he shall be at liberty, subject to control by the trial judge, auditor or referee to make as full and precise answers as he believes to be necessary in order to state the whole truth. One of the greatest abuses of cross-examination of experts is in the efforts often made by attorneys to compel the witnesses to give simply affirmative or negative replies, using questions purposely framed to make such a reply misleading to the jury. This abuse, however, can be controlled by the trial judge without the necessity of a special statutory provision.

If clause after clause of this proposed act is analyzed, it will be found that it contains much of which everyone should approve, much to which objection could be made, and more that calls for neither objection nor approval. Everything that is really good in the law can be secured by the present methods if the law is wisely and justly administered.

Suits for damages based upon the claim of disease or disturbance of the nervous system, the result of injuries received in railroad or other accidents, hold a prominent place in medico-legal practice. My own experience in this field has been large. These cases are a fruitful source of discussion, sometimes of an acrid character.

The reminiscences and reflections of Sergeant Ballantine, in that most interesting book, "Some Experiences of a Barrister's Life," have found their

counterpart in my own experience. He tells the story of a plaintiff in one case who had no apparent injuries, but in whose case it was stated that he had received a serious spinal shock, the result of which might be fatal. His appearance in the witness box, according to Ballantine, did not support this idea, and his manner prejudiced his case exceedingly. Many thought that he was not candid in giving his evidence; and the statements of the doctors, which gave a very grave aspect to the alleged symptoms, had in consequence less weight than they deserved. A verdict quite inadequate to the injuries, if truly represented, was rendered. "Within three months," says Ballantine, "the unfortunate gentleman, a comparatively young man, died, and it could not be doubted that his premature death resulted from the effects of the injuries he had undergone, and which had been correctly indicated by the medical men."

The plaintiff in a suit for alleged injuries is sometimes the worst witness in his or her own behalf, even when the case from every point of view is of the strongest character. Some plaintiffs, no matter how much their real sickness and suffering are, when under examination or on the witness stand, seem to feel that it is their duty to make their case as bad as possible to counsel, physician, judge and jury. Consciously or unconsciously they fall into habits of exaggeration; they may even make misstatements in order to emphasize their real condition, and on cross-examination they act as if it was their duty always to antagonize the attorneys examining them. In these and other ways

they make a bad impression and prejudice their case in the minds of jury and judge, and yet medically and morally their cases may be unimpeachable.

Quite recently I had a most instructive experience of this sort. A woman had been seriously injured in attempting to board a trolley car. The case apparently was one similar to several that have been reported in which, after surgical traumatism a symptom picture similar to that presented by syringomyelia or amyotrophic sclerosis had developed. The case had come under my observation at intervals of two or three years, and the symptoms were undoubtedly on the increase. The evidence showed that the plaintiff was well before the accident.

In the first trial her bearing was such and her method of answering under cross-examination so pugnacious and irrelevant, that the judge finally ordered the withdrawal of a juror and the case went over to another term. Before the defendant's testimony was presented at the second trial the case was settled by agreement.

Everyone who has done much court work probably has had a few experiences like one of another sort recorded by Ballantine, that of a man who was carried into court on a litter, and who, because of his appearance of severe and probably irrecoverable disease received extremely large damages, yet a few months later was seen enjoying himself among the rugged mountains of Wales.

Owing to the necessity for brevity I shall merely state my conclusions regarding some of the most important points usually discussed in connection

with cases of this description. Now and then I have met with a case of unmitigated fraud. In a fair percentage of cases organic lesions of the cranium, spinal column, or of their coverings or contents occur. Many cases of true hysteria, neurasthenia and hysteroneurasthenia result from railway and other injuries, and these cases are justly deserving of compensation proportionate to the degree of their suffering and the probable persistence of their disorders. Exaggeration is comparatively common in cases in which real injuries have been received. Even feigning may occasionally be present in a case which has a just basis in real disease either functional or organic, giving a state of affairs comparable to the simulation of insanity by one really insane. Disease existing before the receipt of injuries or alleged injuries is sometimes attributed to such injuries. In the vast majority of cases that have fallen under my care or observation some sort of compensation was justly due to those in whose behalf it was claimed.

With regard to these suits for damages for alleged injuries to the nervous system, I am glad to say that in Philadelphia and neighboring counties or states in which my experience has been chiefly obtained, the respect for medical expert testimony in such cases has increased, and justice is now more frequently done than formerly, both to plaintiff and defendant. From year to year I have seen a diminution in the number of cases of this sort which go to juries. They are much more frequently settled out of court, or if they go into court not infrequently after the medical

testimony for the plaintiff is given a juror is withdrawn and a basis of settlement is reached between the attorneys for the plaintiff and the defendant. The amounts given in settlement of these cases are not as large as those formerly so often obtained by allowing the case to go to the jury, and on the other hand just compensation is not often so long withheld through the law's delays. Various causes may have co-operated to bring about these better results. The courts look askance at excessive verdicts; when such verdicts were given the defense was more likely to appeal for a new trial, and if this was denied, to go to the Supreme Court for a hearing of the case; the defendants have learned to appreciate the frequency with which real, although at times not very apparent injury occurs; they have also learned that juries, and in many instances the courts, give due weight to carefully presented medical facts and opinions.

Let me in conclusion speak briefly about the physician's conduct as a witness, taking up, however, only a few of the many points which, from the standpoint of my personal experience, could be regarded as of interest. These points, which will be illustrated by some personal references, are (1) that the witness should not go outside of his own province; (2) that his testimony should be relevant and his manner respectful; (3) that he should always tell his story in plain language; and (4) that he should never pose as an expert outside of his own special line of work.

In October, 1884, a convict of the state penitentiary for the Eastern Dis-

trict of Pennsylvania was tried and convicted of murder in the first degree. During the progress of the trial I was asked by the court whether I believed that a delusional lunatic, or any insane man, if impelled to the commission of a crime by wrath, anger, revenge, etc., was a responsible being, and answered in effect that if an insane man does an act from an insane motive, connected with his delusions, he is not responsible. The next day one of my medical colleagues, also a witness for the defense, wiser in his day and generation than I, when asked by the judge whether a delusion such as the accused had would render him irresponsible, replied that if responsibility to the laws of the land was meant he thought that it was the province of the court to decide. At that time my view was that when a man was on trial for his life and was being defended from a medical standpoint, the question of responsibility was one to be frankly met by medical witnesses. I took the ground that such a question put to a medical witness had reference to the moral accountability of the person under discussion. Later I modified my views and changed my policy as to answers proper to questions of this description. It was held in the instance related, and I now think correctly, that I had invaded the province of the court. My duty was simply to define the mental status of the accused.

A number of times since 1884 I have been questioned on the witness stand as to my views regarding the responsibility of the person on trial. Such a question was propounded to me by the

district attorney in a case in Bucks county, Pennsylvania, where I was a witness for the defense. My answer was simply to turn to the honorable judge and say that the responsibility of the accused did not rest with me but with the court, an answer which manifestly pleased both the court and the audience. In a recent case tried in Camden, New Jersey, in which I acted as medical witness for the prosecution, after I had given my testimony, which was to the effect that the insanity of the prisoner had not been established, the counsel for the defense, during the cross-examination, asked me whether, in the light of the facts that had been presented, I was willing to say that the man was responsible for the act which he committed. My answer was that I was not an expert on responsibility, the reply being evidently as satisfactory to the court as it was unsatisfactory to my interrogator.

While as a rule repartee on the witness stand is inadvisable, now and then it may be justified by circumstances or by the manner of the cross-examining attorney. Occasionally I have seen a quiet and pointed rejoinder lead to a more respectful attitude on the part of the attorney. Once, for instance, I heard a clergyman, who was a lay witness in a suit for damages, turn the laugh on his cross-examiner. He had testified that the plaintiff, who was one of his flock, was much depressed and changed since the railroad accident. "You say, Mr. Blank,," said the attorney, "that the plaintiff, who is a member of your congregation, has seemed to you to be much more nervous than he was formerly?" "Yes," replied

the clergyman, "that is true." "But," said the attorney, "you have not taken into account the depressing effects of your sermons; you are a Presbyterian, I believe." "Perhaps not," again replied the clergyman, "but our religion is not without hope, even for lawyers."

A medical witness having been asked the amount of his compensation for his services in the case in which he had testified, and having stated the sum, the attorney on the other side said to him: "Do you not think, doctor, that this is a pretty large sum to be paid for your services in this case?" The doctor replied that he did not think any sum was too large to compensate for a cross-examination by Mr. Blank.

The medical witness should learn not to say too much. In a homicide case in the state of New Jersey in which I was in attendance as witness for the defense, a well known surgeon who was one of the medical witnesses for the prosecution, continued his testimony for the best part of two days, it seemingly being impossible not only for the counsel for the defense but also the counsel for the prosecution and the presiding judge to curb his volubility and prolixity. He managed to bring in a large part of his own life history and various reference to his ancestors. When called upon to give the facts regarding the probing of a gunshot wound he introduced a statement regarding Nelaton's probe, giving some account of the French surgeon, also of his attendance upon Garabaldi, where this probe was first used, incidentally bringing in many interesting but unconnected facts regarding the history of probes and of surgeons and military

surgery in general. The lecture of the witness was doubtless interesting to many of his court house auditors, but it was a waste of time, and most of what he said had little or no bearing upon the case in hand. Usually such a procedure will not be allowed, but medical witnesses often give instances less extreme of unnecessary diffuseness. The witness should state what he has to say as fully and clearly as necessary, but no more.

It is possible, although it is exceptional, for a witness to be too brief through nervousness or modesty; or perhaps through ignorance he may fail to answer fully the questions that are put to him, and what is ordinarily a virtue may become a fault. Yes and no are not always sufficient, and an answer may be condensed by omissions rather than by a skillful use of language or of a commendable employment of self-restraint.

Many years ago in a case which attracted widespread attention, one in which insanity was the issue, I was cross-examined at great length by one of the then recognized leaders of the Philadelphia bar. I regarded myself as thoroughly posted in the case in hand, and such questions bearing upon the real facts and issues of the case as were asked were easily or at least readily answered. To my surprise, although the examination was prolonged, questions pertinent to the issues were very few. My cross-examiner seemed bent upon keeping me as far away from the real question as was possible. This indeed was his plan of operation, his ob-

ject being not to bring out the truth but to get "jury points," and win his case. He was rewarded for his efforts by obtaining a verdict in favor of his client. Such a method of cross-examination is perhaps essentially unjust, but the latitude allowed the counsel by most courts is such that it will not be interfered with as a rule. It is perhaps admissible on the ground that the cross-examining counsel have the right to show any defects, prejudices, weaknesses or other shortcomings in medical experts in order to cast a doubt upon the value of their testimony. The best thing for a medical witness to do under such circumstances is to not resent what seems to him to be an injustice, and not to speak of the irrelevancy of the examination, but to answer as coolly and clearly as possible all questions put to him. A medical witness has nothing to do as to the decision of what should or should not be asked him. The court should protect him, or if the court does not see fit to do this of its own volition the attorney who has secured his services should make proper objections and see that the witness is protected. Often such methods of cross-examination do more harm than good. They weary the jury and in some instances reveal their own innate foolishness or worthlessness.

The Good Samaritan Hospital in Portland, Ore., caught fire September 5th. It is a large three-story building, and for a time it was thought that considerable loss of life was inevitable. The patients were removed in safety, however, and the fire extinguished.

Address in Surgery.*

Should Strict Asepsis Be Demanded of the General Practitioner in Accident Surgery and Emergency Operations? Why? How Can They Do This Most Successfully?

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Mr. President and Members of the
State Medical Society of Colorado:

Casting about in my mind for a subject, the consideration of which might be of interest to all practitioners of medicine rather than to the limited number who practice surgery, it occurred to me that a brief attempt to answer the following questions would prove both interesting and profitable: "Should strict asepsis be demanded of the general practitioner in accident surgery and emergency operations? Why? How can he most successfully attain asepsis?"

Although the whole subject may appear trite, the questions propounded are most pregnant ones, because nothing which promises relief of human suffering and concerns the saving of human life can ever fail to be of vital interest to the profession.

With but a few exceptions the subject of antisepsis and asepsis has been treated of from the standpoint of the operating surgeon, forgetful of the dictum of Nussbaum that "the fate of the wounded is in the hands of him who first sees him." Moreover the courts

have frequently decided that neglect of modern methods of wound-treatment is so culpable that it behooves us to see to it that we secure the best obtainable asepsis, even in emergency practice.

I am firmly convinced that the whole subject of antisepsis and asepsis has been rendered apparently complex, and therefore unattainable by any but experts because those advocating it are themselves often woefully ignorant of the essential principles upon which success depends, upon the one hand laying stress upon troublesome and unimportant details, and upon the other announcing some royal road to success for the general practitioner which proves a delusion and a snare, because in direct contravention of some essential principle of asepsis. Soon the practitioner comes to believe that the attainment of asepsis is impossible outside of a well-equipped hospital, applies those methods which he employs in a half-hearted manner and, seeing the frequent failures of the supposed expert whose methods he tries to follow, is secretly encouraged to be more and more lax in his own practice.

A very brief review of the evolution

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of asepsis in surgery will, I trust, explain the reasons for some of the unfounded claims made in the past, why these were made, how gradually exact facts took the place of ex-cathedra statements, and thus put you in possession of the few essential principles involved.

Thus informed, if you are in earnest, you will secure, under the most favorable circumstances, as perfect asepsis in emergency work as the most expert surgeon, while with the worst environment you will also secure all that any hospital surgeon can or the law demands of you. Again, clearly apprehending the full applicability of my statements, you can then detect the causes of failure in the practice of others, and thus be able to avoid future trouble and add to, instead of lessening your faith in asepsis.*

Much confusion has arisen from confounding the methods of applying the principles of asepsis and the principles themselves, whence follows, of necessity, neglect of some minutiae which seems to the ill-informed of trivial importance, yet their omission inevitably leads to vitiation of the results, because some principle has been unwittingly contravened.

Bear in mind that Lord Lister's theory of suppuration and wound-treatment *was only a theory*, a daring application of the scientific use of the imagination, as Tyndall calls it, until Koch established bacteriology upon a scientific basis; then, and then only, had Lister's theory a basis of scientific facts. Nay more, soon some of his ideas were seen to be erroneous, yet they still remain as stumbling blocks in the path

of many surgeons, looming up in such gigantic proportions as actually to hide from their sight some of the facts essential for the successful practice of Listerism. I shall not strictly observe the historical order of events, but shall rather endeavor to place in their proper relation the epoch-making discoveries and briefly indicate the changes of practice necessarily following the discovery of each new fact.

The observation that fluids containing organic substances would remain unchanged for long periods if contamination by air germs was avoided, and the further fact that a certain disease of the grape vine was due to microscopic organisms, led Lister to infer that suppuration in wounds resulted from the action of air germs falling upon the field of operation before, but chiefly *during*, operations upon the instruments and sponges, upon dressings and the operator's hands: note carefully, "upon the surfaces of the objects mentioned." To meet this source of infection the spray was employed, preceded by a mere rinsing off of the *surfaces* of the field of operation and the surgeon's hands with a solution of carbolic acid, and followed by irrigation of the wound itself with the same to remove any germs accidentally reaching it despite the spray, the carbolized veil, etc. The sponges and dressings were also impregnated with germicidal drugs to destroy the germs they originally contained, but particularly those settling from the air during the course of the operation. Wonderful results followed, but they were not uniform, pus being often formed, while micro-organisms

could be found in the wound discharges, even when these were not purulent, as was often the case. Bacteriological study eventually proved that the patient's skin, even the deeper layers of the epidermis, the surgeon's hands, and the dressings, in spite of the free use of germicidal drugs, were a more prolific source of micro-organisms than the air. Of equal importance was the demonstrated fact that pathogenic organisms differed much in their virulence, and that the tissues could cope with a considerable number of bacteria provided their normal resistance was not reduced by previous disease, the use of chemical germicides, or severe traumatism from injury or during operation. In fact, the air has been shown to rarely contain any but non-pathogenic moulds in private houses or properly cared for operating rooms, unless currents of air set actual dust in motion. Nevertheless, the idea still haunts the practitioner's mind that the chief source of wound complications is germs deposited from the air, this erroneous view leading him to neglect far more dangerous sources of infection. Continued investigation, stimulated by the failure of chemicals to destroy bacteria under many clinical conditions, further led to the discovery that heat, and heat alone, could be relied upon to sterilize dressings, instruments, and above all, ligature materials, especially if the latter were made of animal tissues which often contain bacteria peculiarly resistant to chemical germicides: indeed, these latter have been finally shown usually to act only as inhibitors of germ growth in the strength employed, especially in

wounds, and but exceptionally as true destructive agents.

Nearly all these difficulties have been surmounted, but method after method for sterilizing the hands has been proposed, each heralded by the claim of infallibility, and still the hands cannot with certainty be made absolutely germ-free. It is true that by the best methods they can be made so nearly germ-free as to be innocuous when thrust into the depths of a wound, yet it too often proves true, as Kocher has shown, that hands, which of themselves will not directly infect, will infect a perfectly sterile ligature tied by these same hands, because the ligature carries with it microscopic masses of epithelium containing bacteria from the deeper layers of the epidermis, incorporated with the thread by the abrading action of tying.

I wish here to reiterate for the purpose of emphasis two important points, viz., the reasons why the majority of wounds do well if the best methods of hand sterilization are adopted, even if the hands are often not absolutely germ-free; and why wounds present no evidence of disturbance whose non-purulent discharges can be proved to contain micro-organisms.

Scientific investigation has shown, as I have already pointed out, the differing degrees of virulence among pathogenic bacteria, some requiring a peculiar combination of favoring circumstances to render them harmful, and that the healthy tissues can resist the action of a considerable number even of the more active forms, hence the degree of freedom from micro-or-

ganisms on the hands which can be secured with due care is often compatible with undisturbed repair. The bacteria detected in the wound-discharges are those which have found it impossible to gain a foot-hold in the tissues and multiply there to a sufficient number to interfere with the processes of repair. These investigations have also taught us that the difficulties in the way of sterilizing the hands are so great, and in certain emergencies of practice, as upon the battle field, and after recent fouling of the hands, are so impossible, that some absolutely reliable device must be adopted under such circumstances, to secure anything like uniform results even with the most favorable environment.

Do not misunderstand me. If the ligatures, sutures and drainage materials are put into the wound aseptic, the comparatively innocuous germs impossible to entirely remove from the hands will rarely do harm. But what if from carelessness, lack of facilities or lack of comprehension of principles, the aseptic ligature or drain becomes infected by the imperfectly cleansed hands, and in false security, we attempt that which we would not otherwise dare to do? Disaster will surely follow. Let me relate a recent personal experience. Despite a most rigid enforcement of the best methods of disinfection of the assistants' and nurses' hands, including my own, repeated *late* infections were observed in my clinic. The dressings, ligatures, the field of operation were all examined bacteriologically without any adequate explanation of the suppuration, until the ends of the ligatures cut

off after tying the vessels during the operation were examined. These, proven before handling to be aseptic, now contained the same germs upon their surfaces as those found upon the hands of the assistant who was observed to be in the habit of frequently straightening out the bundle of threads by smoothing them down with his unoccupied hand: the same germs were also found in the pus from the late suppurations. The employment by this assistant of a device which I shall presently describe, at once reduced the number of infected cases, while the cut ends of the ligatures no longer contained microbes, as shown by culture experiments. No deluging of a wound with irritating yet ineffectual germicidal solutions will prevent late trouble from infected ligatures. It is as Tait, the scorner of asepsis, yet the one who profited so much by it, says, it is the "deadly hand" which, because it so often cannot be surely disinfected, does most of the harm.

Is there, after all, any means known to science whereby a perfectly aseptic hand can be secured and maintained? Yes, provided that the sterile hand is not subsequently allowed to come in contact with any extraneous objects which have not been rendered aseptic, for experiment has amply demonstrated that no object, however clean it may be to the eye, is really sterile unless specially treated. If this accidental contact with septic substances is either unobserved or not remedied, trouble is the rule; yet, under such circumstances, surprise is often expressed and doubt of the efficacy of modern methods is

too often confirmed, because it is said, "all Dr. Blanks' directions were carried out, yet sepsis followed just as if no precautions had been taken." Still further, in the face of repeated experiments, borne out too fully by clinical experience, proving the folly of relying upon the use of so-called germicidal solutions for the destruction of germs which have been carelessly allowed to gain access to a wound or contaminate the operator's hands, this great service rendered us by science is persistently overlooked by too many surgeons, who then blame Listerism instead of their own stupid or ignorant neglect of the principles which have been shown both by experiment and experience to be essential for success. Thus, I have seen a surgeon employ the most elaborate precautions for an abdominal section and then, in the midst of the operation, take out his pocket case, abstract from it a roll of sulphurous acid chromicised cat-gut, carelessly wash it and his now septic hand in a sublimate solution, and then express surprise that the patient died in a few days of septic peritonitis. This is not a solitary exception, but the same defiance of the teachings of science is seen in a different form in the continued employment of chemically sterilized gut, in face of the repeated demonstrations of the unreliability of anything but caloric for this purpose. *After sterilization by heat* some prefer to impregnate the ligature with a germicidal substance, but this is far different from *trusting to the germicide to render the ligature sterile*. Still further, this expedient is entirely unnecessary if the ligatures and the tis-

sues are handled with absolutely sterile hands, as I hope I can show you can be done.

If then, an experienced surgeon, with all the theoretical and practical knowledge of the subject of asepsis available at his disposal, cannot so insure disinfection of his own or his assistant's hands that he can always safely operate upon normally resistant tissues, should aseptic hands be either expected or demanded of the general practitioner, who may at one time dress a suppurating case of erysipelas, at the next call handle a scarlatinous patient, and then be compelled shortly after to thrust this same hand into a contused, perhaps lacerated uterus injured by a severe labor, or dress the partially devitalized track of a gunshot wound? Yes, I confidently answer, it is for the very reason that the general practitioner cannot avoid contaminating his hands as the surgeon and his assistants should and can, and because he first sees many injuries, that hand-asepsis is imperative for him. Recognition of this duty will do away with the necessity for many an operation and save many a life, while neglect of asepsis will render nugatory the highest surgical skill, vainly exerted in the face of a serious infection, the direct result of the criminal carelessness of the general practitioner. You can rest assured that in time the position I am contending for will be unhesitating recognized as correct, viz., that it is even more the duty of the general practitioner to be aseptic than for the surgeon.

Ponder over the results of wound-treatment less than twenty years ago, when a prominent writer contended that

the average mortality for amputations in the best hospitals of England and America was from 25 to 33 per cent., and records, with pride, that his own mortality was only about 20 per cent. Think of the occurrence of pyaemia in the same institutions in 9 per cent. of all amputation cases, and a death rate of 30.1 per cent. from the same disease in those cases terminating fatally! Go further back and imagine the condition of surgery when Benj. Bell could say, that long after the invention of the tourniquet more than one-half died who submitted to amputation, i. e., that about two out of three patients perished from sepsis or secondary hemorrhage, the result of infection! Contrast this with the worst results of asepsis. See how, under most unfavorable circumstances, as upon the firing line, asepsis has been so well maintained that amputation or death from sepsis has become a rarity after smashes of bone or perforation of large joints by bullets. Recall the death rate in maternity and private obstetric practice of only a third of a century ago, and that observed to-day when, if a death occurs, it can usually be shown that had clean hands been secured the disaster would have been avoided, and learn from such cases how readily *just in proportion as we sin against light*, can all the horrors of the past be reproduced. I am perfectly willing to admit that other factors have been operative in securing our modern triumphs, but they are only of minor importance, while the reasons for their success and the necessity for their continued employment have been revealed by the students of asepsis. Asepsis, the

logical outcome of anti-sepsis, is the only adequate explanation of the vast differences observed between the past and the present. It is my deliberate opinion, that any practitioner who through either ignorance or neglect omits any of the safeguards placed at his disposal by science for the protection of his patients against disease, should he lose the case is morally guilty of the death and should be held legally responsible. Consider the sanctity of human life, and then decide whether you will deliberately peril it because too lazy to acquire the requisite knowledge or, if you possess this, to practice it. I say "peril life," for nature may prove both more kind and more powerful than the doctor.

Asepsis being then of such paramount importance and hand sterilization so difficult, if not impossible, especially for the general practitioner, what can be done? Wear rubber gloves, after thorough cleansing of the hands by some approved method, to dress all wounds, perform any operation, or attend any case of labor. Boiling for a few minutes will render these gloves absolutely sterile. Where boiling is impossible, or the glove becomes accidentally fouled, soaking for 5 minutes in a solution of corrosive sublimate of a strength of 1-1,000 or carbolic acid 5 per cent., will render them aseptic. Of course all traces of grease must be removed by soap and water before placing in corrosive sublimate or carbolic solution, and all traces of these drugs gotten rid of by sterilized water or alcohol before operating. Where neither alcohol nor sterilized water is obtain-

able, the strong solutions should be removed by weak solutions of the germicide. I have also had demonstrated by one of my assistants that mere washing with abundance of soap and water (preferably hot) will render sterile rubber tissue on which pure cultures of pyogenic organisms have been smeared. Washing with alcohol or a sublimate solution will do the same. Of course I only recommend these procedures for emergencies where boiling cannot be resorted to or for fouling of the gloves while using them. Certain precautions must be observed in their use. They can best be put on by filling them with sterilized water or a germicidal solution and then, turning down the gauntlet part, slip the fingers in, carefully following with the thumb. After both gloves are on rinse off their outer surfaces with a germicidal solution or sterilized water, lest the water escaping from the interior of the gloves while putting them on contain germs from the imperfectly cleansed hand. When removing them, dip them in water and turn them inside out, dry them carefully, and dust them freely with powdered talc. If punctured during an operation a thin finger-cot must be pulled over the finger. After operation most tears and all punctures can be readily repaired with cement obtainable from the makers. Thus cared for, a pair of these gloves can be used for months in an ordinary practice. The loss of tactile sense is less than would be believed, and one soon becomes accustomed to the modification of the sensations. If tissues, such as the intestines, are too slippery to hold, a piece of gauze will

obviate all difficulty, and the same expedient must be adopted when tying a thick pedicle lest the glove be torn. Those who use gloves must learn to be cautious how they use hemostats, needles, etc., to avoid cutting or puncturing the gloves, but a little practice is all that is requisite. Needle forceps must be used, at least to withdraw a needle, otherwise the glove will surely be torn.

Owing to the risks of tearing a glove, the possibility that water from within the glove may flow over its outer surface, and the risk attendant upon yielding to the temptation of pulling off the gloves when embarrassed by difficulties in manipulating parts, I shall state what I believe to be the best method of preparing the hands for the gloves.

Mechanical friction with soap and hot water to remove all dirt under and around the nails and the more superficial layers of the epidermis which harbor so many micro-organisms is the main object. To do this effectually, boil your nail-brush, use green soap to which has been added 2 per cent of formalin solution, or 5 per cent of hydronaphthol. Scrub vigorously with this for at least ten minutes by the clock, using hot water frequently renewed; clean the finger nails, which should be kept short, with a sterilized nail cleaner, again scrub the hands with another sterilized brush and hot water for a couple of minutes, then soak the hands in alcohol three minutes by the clock. By soaking the hands for a further

three minutes in a 1-1000 corrosive sublimate solution, and dipping them occasionally into the same during a prolonged operation, I believe in any case where for good reasons gloves are not obtainable you can, in most instances, secure aseptic results if you wrap the fingers in gauze while tying the ligatures so as not to infect them. I do not think that if gloves are used there is any necessity for the soaking in a germicidal solution, an advantage for those susceptible to the action of mercury. If the gloves are so torn during an operation as to be useless, either a new pair must be put on, or careful sterilization of the hands must be again effected, lest germs have come to the surface of the hands during the time which has elapsed since the gloves were put on.

Would I recommend careful asepsis for already infected cases? Most assuredly. Why should I add fresh, and perhaps more virulent pyogenic organisms to those present? Why should I implant tetanus germs, perhaps, in the suppurating wound? I would also call your attention to the security against infection enjoyed by the surgeon.

Does all that I have said seem unnecessarily troublesome? Can I truthfully affirm that even with all these precautions failures will not result? In answer to the first query I say, Would you like any precaution neglected, because troublesome, if *you* were the patient? If this is true you are bound to do for your patients what you would

demand for yourselves. The second question is properly answered by saying that the precautions I have advised have been shown by numberless operators to be those followed by the fewest failures.

What measure of success should we expect to attend the efforts of the general practitioner to secure asepsis, many of whose cases are infected when first seen by him, and who cannot command anything like the facilities which too often fail to secure the best results even for the hospital surgeon? If the majority of his wounds and operations proceed aseptically or with only a slight local infection; if the remainder, notwithstanding a severe infection escape perhaps only with their lives at the expense of some loss of function, or possibly eventual sacrifice of a part, if a limb be concerned; if few deaths result from any form of wound infection, and if all labor cases free from any possible infection-focus before labor, proceed without infective disturbance during the puerperium, the results are all that the most exacting should demand.

I shall in conclusion recapitulate the sources of infection and the means of avoiding them.

1. Air-germs can be ignored if strong currents of air be avoided.

2. The field of operation can be rendered practically aseptic, especially as the deeper layers of the epidermis which contain the germs impossible to remove are usually mechanically ex-

cluded from the wound proper by the apposition of the derm by suturing.

3. Mechanical removal of germs by friction, assisted by agents such as alkalies, which tend to disintegrate the superficial layers of the epidermis, should be the chief means employed to secure asepsis of the field of operation and the hands.

4. Alcohol is preferable to ether for the removal of grease, as it dehydrates the deeper layers of the epiderm, thus tending to destroy or inhibit the growth of the germs there resident.

5. Caloric is the only thoroughly reliable agent for the sterilization of ligatures, dressings and sponges.

6. There is no certainly reliable method of sterilization of the hands which renders it safe under all circumstances to tie the ligatures with bare hands.

7. Hence it is our duty to use gloves when tying ligatures and, when possible, at every stage of all operations and

during the dressing of all open wounds.

8. Armed with a pair of these gloves, the practitioner can be independent of everything but water and soap, and can protect his patients from the chiefest danger, viz, his hands.

9. Obstetrical cases can be most safely handled with gloves, especially if active intervention, as the mechanical removal of the placenta, be necessary.

*Understanding that my time, was limited to twenty-five minutes, I have endeavored to compress within the smallest possible limits the ideas I wish to convey to you, asking you to remember that, although illustrations of the application of principles can be multiplied indefinitely, the essential principles themselves can be stated in a few words. I shall therefore make no effort to sustain the truth of my contentions by either argument or extended illustrations, leaving it for you to read between the lines.

Clinical Report.

A Pin in the Vermiform Appendix Simulating Tubo-Ovarian Abscess

BY H. G. WETHERILL, M. D., DENVER, COLO.

Foreign bodies, other than faecal concretions, are rarely found in the vermiform appendix, though it is but a very few years since the occurrence of appendicitis was believed to be most often due to such cause. The finding of a

pin in the appendix has been reported a very few times, one case of recent date having been operated on at the Hospital of Johns Hopkins Medical School. The two cases alluded to here will add to the list. An involvement

of the tube and ovary in an inflammatory mass of primary appendix origin is also rare and worthy of note.

Mrs. M. was brought to me in May 1900, by her physician, Dr. Wm. N. Beggs, who had treated her at intervals for about three years. She was for many years under the care of Dr. J. W. Hemsted of Griswold, Iowa, and during a very severe illness in 1892 was seen by a well known gynecologist in Denver, who advised oophorectomy.

During the past fifteen years she had suffered from recurrent attacks of localized peritonitis in the right pelvis which have been attributed to the right ovary and oviduct, all of her medical advisors agreeing that it was probable that she had a tubo-ovarian abscess on that side.

The essential points of her history, as elicited by me are as follows: Occupation, dress-making; married 17 years; one child 15 years of age; no miscarriages; only occasional leukorrhoea; menstruation regular; she has never been robust.

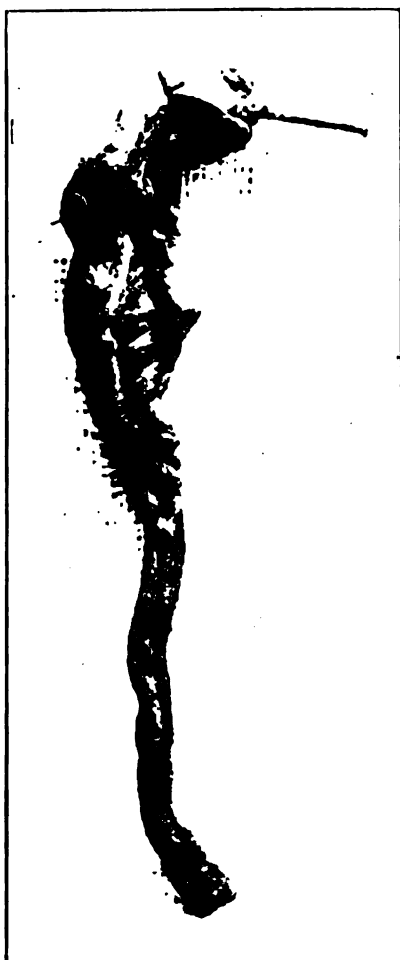
She has had pain in the right inguinal region for about fifteen years with frequent, severe, exacerbations. In the worst of these attacks she was obliged to go to bed and remain there for some days and weeks. During the attacks she had great pain and localized tenderness and was bloated. During the past three years, while under the care of Dr. Beggs, the attacks have been rather more frequent and severe and he tells me that in some of them he had been doubtful of saving her life. She has

persistently refused to be operated upon and came to me under protest, feeling that I might advise operation.

Examination (May 23d). A mass was easily palpable on the posterior aspect of the right broad ligament, apparently about one and one half inches in diameter. It was very tender and painful to touch and firmly fixed and immovable. There seemed to be no other abnormality of the pelvic organs. The uterus was small and in normal position. There was pain and great tenderness in the right inguinal region below the level of the anterior superior-spinous-process, and none whatever at McBurney's point. The oft repeated diagnosis of tubo-ovarian disease on the right side was confirmed by me and operation advised, which advice the patient ultimately decided to accept.

Owing to a misunderstanding, my absence from the city during July, and other things, the patient did not go to the hospital till August and the operation was done on the ninth. While the patient was being anaesthetized I spoke to Dr. Beggs of a recent case of my own in which operation was done for pelvic disease, and, the appendix being examined, was found extensively diseased, though no symptoms had ever been elicited pointing to its existence. He then alluded to an instance in which he had found a pin in a vermiform appendix at an autopsy, the appendix being perfectly normal and the patient having died of other disease. The usual supra-pubic section was made and the bowels pushed up out of

the pelvis. The uterine fundus presented at the lower angle of the wound, being pushed slightly to the left of the median line. Much to my amazement the uterine end of each oviduct presented



a perfectly normal and healthy appearance, the vermiform appendix was seen to hang over the pelvic brim and to dip down into the depth of Douglass' pouch, its distal end being found adherent to the posterior face of the

right broad ligament *below the ovary*; the ovary, appendix and the fimbriated end of the oviduct being fused into one mass, constituting the body which was palpable through the vaginal vault. As it simulated a tubo-ovarian abscess in position, consistency and conformation so very closely it is not remarkable that this diagnosis should have been made by the patient's various medical advisors, particularly as there never had been any distinctive signs pointing to the appendix as the source of the trouble and its first appearance occurred just after her puerperium. The ovary contained a small blood cyst (about half an inch in diameter) but was in other respects in healthy condition, as was the tube, excepting for the plastic deposit which served to fuse them into one mass. The adhesions were broken up, and the right tube and ovary were removed in order to leave a cleaner condition of things in the pelvis, which seemed wise in view of her age and the plastic exudate about the organs. The distal end of the vermiform appendix was brought up into the wound and presented an eroded pin protruding from it, as shown in the photograph, there being also a perforation about one inch from the end, which had evidently been protected along with the head of the pin, by the adhesions. The appendix was amputated in the usual manner, its proximal end having a peculiar funnel shape which is quite unusual, and which made the amputation at some distance from the head

of the colon desirable. The appendix after amputation was five and one half inches long. The recovery of the patient was complete and uneventful, except for some suppuration at the lower angle of the wound about a stitch. She left the hospital in four weeks after her admission.

The question is raised whether her symptoms, extending over about fifteen years, could have been due to the retention of the pin in the appendix during that time. In the absence of all other pelvic diseases it would seem most probable that this was the case. Her frequent recurrences of localized peritonitis were doubtless due to some leakage or transmigration of intestinal bacteria through the distal end of the diseased appendix; which, owing to its unusual length and position, gave rise to the belief that the disease was of tubo-ovarian origin.

This case is another practical illustration of the fallacy of the rather general opinion that appendicitis is always ac-

companied by tenderness over McBurney's point, while as a matter of fact the point of tenderness, if one there be, will be found over the abscess, perforation, or point of greatest irritation about the appendix, which is commonly somewhere near its distal end, which distal end may be in any direction within a radius of six or seven inches from McBurney's point. It is by no means an uncommon occurrence to find the tip of the vermiform appendix fused with the right tube and ovary in cases where there exists as a primary condition an inflammation of the oviduct. I have discovered such a state of things not a few times in my own surgical work in the pelvis and have in such cases removed the appendix along with the tube and ovary more than once, but this is the first time it has occurred to me to find the tube and ovary involved in an inflammation having its origin in the vermiform appendix.

SELECTED ARTICLE.

Researches with Reference to Osmotic Pressure Between Mother and Child.*

By J. VEIT.

The application to the study of medicine of advances made in other departments of natural science has always been of advantage and has often brought to light new facts which at

first apparently of only academic interest, have soon proven of practical value. This seems to me to be especially true with reference to our knowledge of osmotic pressure, the founda-

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tion of which was laid by von Raoul de Vries, van t'Hoff and Hamburger. Those who have studied this subject from a practical standpoint, though few in number, have already taught us valuable lessons. When my attention was first directed to the subject it was with the hope of finding an easy solution of problems in obstetric pathology. I soon became convinced, however, that we have much to learn about certain points in the physiology of obstetrics. These I thought it necessary to study in advance, and will now communicate the results of my work, which may be regarded as preliminary in character. Others, perhaps, will help to complete the physiological part of the work, and still others with plentiful material, the pathological part. Investigations of this character, with regard to obstetric problems, will shed light also upon questions connected with other departments of medicine.

The *first* result of my examination may be stated as follows: At the moment of delivery the freezing point of the fetal blood is somewhat lower than that of the maternal blood. Therefore the molecular weight of the fetal blood is higher, the Na Cl solution to which it is isotonic is stronger, its osmotic power is greater.

Beckmann's apparatus for the determination of the freezing point is well known and has proven, in my experiments, of practical value. Variations may be clearly recognized to the third decimal and by different estimates with

the same fluid may be finally computed. In the first estimates, kindly made for me by Mr. Dekhuysen, the centrifugal process was employed, but this was attended in the case of the fetal blood by great difficulties. This fact induced Mr. Dekhuysen to make experiments to determine whether the centrifugal process was necessary. And the result of these experiments was to show that it was not. This result was welcome, not only because our labors were lightened, but also for the more important reason that it afforded a basis for an exact comparison between the fetal and maternal blood, both being treated in the same manner.

To procure the fetal blood is a simple matter. When the cord is tied early blood remains in the placenta; therefore the blood which runs from the placental end of the severed cord was collected. Blood collected in this manner may safely be regarded as fetal blood free from contamination. As a test, I have reversed the method, tying the cord late when it was empty of fetal blood, and allowing the necessary quantity (10 cm) to flow from the fetal end of the cord. Finally, in one case, when the cord was ligated early, I took the same quantity from the fetal end of the cord. The results of these different trials were practically the same.

Krueger¹ and Scherenziss² obtained fetal blood in the same way.

The maternal blood was obtained in a different manner; most easily during Caesarian section. In this case, when,

during the uterine incision, the placenta was met, the uncontaminated blood was collected in a sterile vessel. The results are just as good when the retro-placental blood-flow is collected by Schultz's method. With care, perfectly pure maternal blood can be obtained. The most uncertain methods are Duncan's, and the utilization of hemorrhages, since the blood may be mixed with amniotic fluid, cervical secretion, urine meconium, etc. I have tested these methods, but did not employ them. In one case, when the relation between the fetal and maternal blood was unusual, Mr. Dekhuysen, to whom I had sent the specimens, marked only so as to distinguish the fetal from the maternal, at once characterized the blood obtained from the vagina by Duncan's method as contaminated. A subsequent experience convinced me of the inaccuracy of this method. Venesection was not employed.

My results in the 10 cases in which I was able to estimate the freezing point of fetal and maternal blood were as follows:

Fetal Blood

Freezing-point....¹—0,6025—²0,542—³0,5275—⁴0,59—⁵0,5625—⁶0,58
⁷—0,553—⁸0,6075—⁹0,59—¹⁰0,63.

Maternal Blood.

Freezing-point....¹—0,5535—²0,532—³0,501—⁴0,57—⁵0,605—⁶0,57
⁷—0,541—⁸0,555—⁹0,60—¹⁰0,585.

Two cases (5 and 9) and also the case of contamination (not included in the table) do not show the usual relation. Both were abnormal cases. In one, labor was of 34 hours' duration and was finally ended by the forceps, and in the

other expression of the fetus was necessary. These facts seem to me to explain the result in these cases.

Experimenting with fetal blood only I obtained the following:

Freezing-point....¹—0,52—²0,588—³0,544—⁴0,5475—⁵0,564—⁶0,570
⁷—0,605—⁸0,54—⁹0,5425.

I will not consider here the size of the child and the period of pregnancy, since both are without influence upon the variations. I will note, however, that in the case of an abortion at the fifth month, which was induced on account of nephritis, the fetal blood had a freezing-point of—0,570. Unfortunately, the maternal blood could not be obtained in this case.

In the cases in which I was able to obtain both fetal and maternal blood, the two abnormal cases being excluded, the averages were as follows: Fetal blood, —0,579; maternal blood, —0,551. Estimating from this by Hamburger's² method, the saline solution to which the blood is isotonic, we obtain in the case of the fetal blood 0,955 per cent and in the case of the maternal blood 0,909 per cent, a difference of 0,045 per cent Na Cl.

Opinions as to the significance of these variations may differ. I consider them important. The differences themselves are worthy of note, especially in view of the very fact that they are so small. Reviewing the obstetric literature of the subject, I find but little concerning the differences in the chemical composition of the fetal and maternal blood. Runge⁴ in particular calls at-

tention to the fact that the fetal blood at the moment of birth is richer in salts than that of the adult, and characterizes as especially striking its greater quantity of undissolved salts. He says that further researches in this direction might yield important results, but this passage in his first edition has not been changed in the fifth. I may assume, therefore, that since then nothing of importance has been done. Nevertheless, we owe to his suggestion the two most important publications on this subject, those of F. Kruger and D. Scherenziss.⁵

F. Krueger has often examined the blood before the first fetal inspiration and estimated the amount of hemoglobin, fibrin and dried residue. According to him, the increase in the quantity of the solid constituents of the fetal blood is of slight importance in comparison with the same increase in the maternal blood. The amount of fibrin is proportionately much less than in the maternal blood. The amount of hemoglobin at the moment of birth equals that of the mother, but is never so great as a few days after birth.

D. Scherenziss found the specific gravity of the fetal blood somewhat lower than that of the adult, the specific gravity of the serum markedly lower. According to him the fetal blood is poor in hemoglobin, but rich in stroma; the amount of fibrin is small, but that of salts is greater in the adult. According to his observations the amount of insoluble salts at the moment of birth

is especially large as compared with the amount in the maternal blood. He found a clear preponderance of insoluble salts in the serum, and of the chlorides in the blood as a whole; also that the fetal blood is somewhat richer in sodium, but poorer in potassium than that of adults.

In view of the fact that the results of chemical analysis coincide with the conclusions reached in determining the freezing point, the meaning of the latter becomes plain. Without losing ourselves in details, we have an index of the chemical character of the fetal blood. In its greater molecular weight we discern a physiological phenomenon, the significance of which we will presently consider.

The second result of my examinations is as follows: The freezing-point of the amniotic fluid is always higher than that of the fetal or maternal blood. Although the number of my estimates is small, their agreement is striking, *e. g.*, freezing point, -0.5 — -0.4925 — -0.503 — -0.501 — -0.485 , an average of -0.496 . The Na Cl solution, which is isotonic to the amniotic fluid, would, therefore, reckoning by Hamburger's method, have a freezing-point of 0.818 per cent. Bousquet⁶ found in one case a freezing-point of 0.51 , and in another, that of a macerated fetus retained for two months, of -0.585 . The latter case, while worthless for determining normal conditions, shows that in this connection there is still much in the pathology of pregnancy that calls for investigation.

It is somewhat more difficult to collect the amniotic fluid. I have only done this in those cases in which the amniotic sac was visible at the vulva, or could be exposed by a Simon's speculum, every source of contamination being avoided. The fact that the estimation -0.503 was in the case of a premature living child, weight 178 g., seems to me worthy of note. Ovariectomy on account of torsion of an ovarian tumor was performed during the abortion.

Hitherto the freezing-point of fetal and maternal blood and of amniotic fluid has been practically unknown. In addition to the two estimates in the case of the amniotic fluid, by Bousquet I find only three estimates by the same author with reference to the maternal blood in eclampsia; these were: -0.61 , -0.60 and -0.62 .

The important question, however, of the value of these results in connection with the physiology of tissue change between mother and child presents itself as soon as one considers these figures.

In answer, I can only present preliminary work, but I believe that even this shows that we may hope for many advantages as the result of these methods. Here also one must begin with the study of the normal conditions before he can hope to solve pathological problems. I will limit myself for the present to the notice of the results of macroscopic examination, considering later the results of the use of the micro-

scope.

In order to decide what are the physical consequences of the difference in molecular weight, which we have found to exist, in other words, how the osmotic pressure is exerted, we must consider the properties of the septum which separates mother and child. The limits of this kind of examination should not be forgotten; it is impossible to explain on purely physical grounds how this septum can permit the passage of similar matter in both directions at the same time. But if any one undertakes to explain general vital phenomena he is always met by difficulties.

The attempts of recent years to penetrate more deeply the mystery surrounding the life properties of the cells can hardly succeed in referring all vital functions to sources purely physical or chemical. We only aim at as good an explanation as is possible under the circumstances.

Finding here two fluids in close proximity and chemical qualities apparently reciprocal, it seems probable that the exchange of matter between these fluids will be better understood in proportion as we become better acquainted with the character of the tissue which separates them; purely vital phenomena must be solved by other methods. What conclusions, then, can we draw from the facts which we have ascertained?

Fehling⁸ has most distinctly pointed out that in considering the process of osmosis we must separate the corpus-

cular elements from the dissolved salts and the water, and he has shown that chloride of potassium passes with especial facility through the separating membrane⁹. He regards the septum as a dialytic membrane through which, in accordance with the definition, water and dissolved crystalline matter may pass, but not the colloid elements) including, therefore, albumen), and the corpuscular. By means, then, of the passage of water and salts through the membrane, the equilibrium between the fluids is maintained.

Despite the plausibility of this assumption, doubt still remained, and this doubt seems to me stronger in view of the demonstrated lower freezing point of the fetal blood. Former doubts found their origin in the question how, under such circumstances, can we conceive of the passage of matter from fetal to maternal blood? Now, however, we may well ask, how can the reverse be the case? We can understand the passage of salts from the fetal blood to the maternal, the latter containing normally a smaller proportion; but reasoning from a physical basis, how can the reverse be true? It certainly is true, however, for the living child continues to grow as long as it is contained in the uterus.

Schroeder,⁹ who cordially agreed with Fehling in the matter, called attention to the difficulty of the transmission of albumin, and was inclined to think that the white blood corpuscles constitute the medium of transfer. It may be

that my assumption that the chorionic epithelium¹¹ is the functionating agent, has not helped materially to solve the difficulty, but, at any rate, it was an hypothesis which at that time had much in its favor.

Shall we then busy ourselves with hypothetical questions about the cells or shall we seek to overcome difficulties by the methods of physics? The former may be reserved for the future. The latter seemed to me to be called for. For the present I have limited my examination to the salts and water.

The membranes enveloping the mature embryo, the amnion, and the chorion with its attached decidual remnants, are easily accessible for examination. At the first trial I was struck by the fact that when water or dilute Na Cl solution came into contact with the external surface of the membranes, something from the membranes themselves was added to the solution, for the latter became of a light red color—a color well diffused and allowing the fluid to remain completely transparent. This substance seemed to correspond to Hamburger's hematoxyse. The fluid above the amnion remained perfectly clear.

Examining the two fluids with reference to the freezing-point (normal salt solution above on the amniotic side and distilled water below) I found, by estimates made at different periods, a difference in the freezing-point. This is illustrated in the following table:

I. Water at first.	Freezing-point=0
Water after 24 hours.	" } =-0,005
Salt solution at first.	" } =-0,0025
" after 24 hours.	" } =-0,3275
" after 24 hours.	" } =-0,3175
[Surface of contact in test I only 1 cm. in diameter.]	
II. Water at first.	Freezing-point =0
" after 24 hours.	" =-0,575
Salt solution at first.	" =-0,3275
" after 24 hours.	" =-0,1275
III. Water at first.	" =-0
" after 24 hours.	" =-0,015
Salt solution at first.	" =-0,39
" after 2 hours.	" =-0,33
IV. Water at first.	" =-0
" after 4 hours.	" =-0,01
Salt solution at first.	" =-0,335
" after 4 hours.	" =-0,32
V. Water at first.	" =-0
" after 19 hours.	" =-0,05
Salt solution at first.	" =-0,605
" after 19 hours.	" =-0,488

Could the lowered freezing-point of the water have been caused by salts from the membranes? Very little influence, if any, could have been exerted. To test the matter, I placed a piece of the membranes in water. The size of the piece, the quantity of the water used and the time employed corresponded to examination V. The freezing point of the water remained 0.

I conclude, therefore, that the salts contained in the water came from the normal salt solution, which was separated from it by the membranes. The process, therefore, is one of dialysis, but very slight in character, for after nineteen hours the difference in the freezing-point of the two fluids separated by the membranes was still marked ($-0,05^{\circ}$ against $-0,488^{\circ}$). A complete equilibrium, then, was by no means reached. There were some individual variations, however. In examination II, after twenty-four hours the separated fluids showed less difference in the freezing-point.

If, in order to account for the incomplete dialytic action, we assume that we have to deal with a half permeable membrane, we are met by the fact that there was no perceptible increase of the Na Cl solution, but, on the contrary, a slight but perceptible decrease.

The fact that the membranes became soaked, showing that they have the power of attracting water, seems to me worthy of notice. Freely suspended, they withdraw from 100 ccm. of water, 11 ccm. in nineteen hours. In test V., even under the pressure of the Na Cl solution and of a rubber band, they withdraw from 150 ccm. of water 7 ccm. in nineteen hours. The physics of this process is not as yet completely understood, but there is no doubt as to the fact. The fact that with this soaking this permeability of the membrane was diminished is also important. It is well known that other physical changes in animal membranes result from a narrowing of the pores.

However this may be, we may regard as important the determination of the fact that at the end of pregnancy the fetal envelopes correspond in character to a dialytic membrane, but only in a restricted sense.

The study of the physical properties of the placenta is attended with great difficulties. My first attempt taught me that in the case of the blood which, as the result of early ligation of the cord, distends the fetal vessels of the placenta, the degree of diminution of the freezing-point is less. Immediately

after delivery it was -0.63 ; twenty hours later -0.415 . Therefore either the blood attracted water or gave up salts.

The fluid, originally distilled water, which in this case surrounded the uterine surface of the placenta, took up salts, but the quantity of contained salts was decidedly less than in the blood vessels:

Contents of the Blood Vessels.		Water about the Placenta.
After 2 hours.....	Freezing-point -0.54	-0.065
" 3 ".....	" " -0.542	-0.039
" 4 ".....	" " -0.375	-0.05
" 10 ".....	" " -0.58	-0.05
" 24 ".....	" " -0.415	-0.085

It became necessary then to study the origin of these salts. I compare here the results obtained in a placenta with distended fetal vessels, and one with empty fetal vessels, the placenta being laid in water:

Freezing-Point of the Water.	Placenta Empty	Placenta Full.
One-fourth hour after putting placenta in water.....	-0.015	-0.0015
Two hours after putting placenta in water.....	-0.0325	
	-0.05	-0.05

We see from the above that the salts in the vessels had but little influence upon the quantity of the surrounding water. Therefore the salts are derived, in part at least, from sources other than the fetal blood. They are derived in part from the maternal blood remaining between and upon the cotyledons. The more I irrigated the placenta the less was the lowering of the freezing-point. The salts are partly derived from the placental tissue itself.

In one case, having selected a placenta, the fetal vessels of which were about empty, and having washed away the maternal blood from the maternal surface, I placed it with the uterine surface in 450 c. cm. of distilled water, and having bent the fetal surface of the placenta until it became concave, filled the concavity with 31 ccm. of normal salt solution with a freezing-point of -0.595 . After ten and a half hours the 31 ccm. had been reduced to 25 ccm. and the freezing-point had become -0.58 ; here, then, were lacking 6 ccm. of distilled water, and reckoning the quantity of salts from the difference in the freezing-point 0.13 g. of Na Cl. The 450 ccm. of distilled water on the maternal side of the placenta had become 460 ccm. and the freezing-point 0.05; in other words, the 460 ccm. contained -0.38 g. Na Cl, together with a corresponding quantity of other salts of the same isotonic quality: 3 ccm. of distilled water, then, and 0.25 g. Na Cl had come from the placenta.

I conclude, therefore, that the fetal blood can, and in my researches did, give off salts, which passed through the substance of the placenta, but water also passed through the placenta in a direction corresponding to that between the ovum cavity and the space between the villi. This would seem to accord to the placenta the character of a dialytic membrane, but in a much less degree than is the case with the fetal envelopes; after twenty to twenty-four hours the quantity of salts above and

below the placenta was very different; an equilibrium, such as corresponds to a true dialysis, occurred only incompletely and varied in different cases.

It also seemed from the experiments as though the cells of the placenta were separated from the intervillous spaces by a dialytic membrane. It permitted the passage of salts and water to a certain degree and for a certain time. Here, again, it must be admitted that the physical character of the placenta became changed, so that it no longer had the property of dialysis; in fact, permitted the passage of practically nothing. Whether in this case we have to do with a loss of permeability in the membrane cannot as yet be stated; further research is necessary.

And so we must assume that in the living woman the slight differences which exist in the fetal and maternal blood are brought into a certain kind of equilibrium by means of the structure of the placenta itself. Changes in the quantity of salts contained in the blood at once cause changes in the physical character of the placenta, regulate the osmotic relations, and render further dialysis difficult. The changes in our experiments are coarse. Normal salt solution is opposed to distilled water; in the living placenta they are much finer, since one salt solution is opposed to another somewhat stronger.

Those things which we observe experimentally as the result of strong physical influences brought to bear upon the placenta some time after its

expulsion are, of course, affected immediately during life.

But there is another question to be answered. How does the fetal blood maintain its higher molecular weight, and how and where does it take up salts? It seems to me that we have a right to assume that the conditions which obtain at birth hold good at least for the second half of pregnancy, since in the case of a fetus born with signs of life (artificial abortion for nephritis, weight 445 g) I found the freezing-point (-0.570) much less than my estimate of the average freezing-point of the maternal blood. If, then, in spite of the higher molecular weight, the equilibrium remains the same, this certainly corresponds with the sparingness of the fetal economy, which only gives up matter after repeated use, but from a mechanical standpoint we can not explain the taking up of the salts. For this the work of the fetal cells which surround the intervillous spaces is necessary, and therefore those of the chorionic epithelium. The study of their physiological function is therefore of great interest. De Jong¹² has shown that these cells of Langhan's layer are secretory cells, and he regards the contents of the placental cysts as the secretion of these cells. Hence it is easy to assume for these or similar cells a work of resorption.

That the taking up of water during pregnancy is favored as soon as, or as long as, the sheath-wall corresponds to a half permeable membrane, is impor-

tant, since we know, as the result of Fehling's labors, how large a proportion of the fetal body is composed of water. He computed that this proportion amounted at the beginning of pregnancy to 97 per cent and at the end of pregnancy to 73.9 per cent, as opposed to 58 per cent in the adult.

Whether the permeability of the fetal envelopes varies at different times, as Werth and Krukenberg assume, we do not positively know. It seems to me just as important to study the physical consequences of these change as to determine under what pathological conditions the placenta and membranes assume the character of a half-permeable membrane. This is certainly important in connection with molar pregnancy and with post-mortem changes in the fetus.

I am unable to give any information as to the freezing-point of the maternal blood during pregnancy. Without further investigation I am not able to confirm the results of Vicarelli,¹³ who found by Hamburger's method a slow increase of isotonic property.

As to tissue exchange between mother and child, I conclude that, with certain definite limitations, the sheath-wall separating mother and child is dialytic in character. This, however, does not explain the taking up of salts, but only their giving off. We must therefore refer the taking up of salts to an action of placental cells, and these cells, in my opinion, are those of Langhan's sheath.

The study of this question will be-

come easier in proportion as our knowledge of the physico-chemical properties under varying circumstances, of fetal and maternal blood, and of the membranes which separate them, increases. In particular, do I anticipated essential advances in the pathology of eclampsia, a condition in which we are, for therapeutical reasons, justified in taking blood from the mother. The three freezing-point determinations already made by Bousquet are not sufficient.

In conclusion, I must thank my colleagues, Messrs. Dekhausen and R. Schalten, for their valuable aid in making the estimates, and Professors Einthoven and Kamerlingh-Onnes for their assistance in the solution of Physico-chemical problems.

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2. " " " " "
3. *Revue de med.* Nov., 1895.
4. *Lehrbuch der Geburtshülfe.* 1 Aufl. S. 37; 5 Aufl. S. 40.
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6. *These de Paris*, 1899.
7. I also once found under similar circumstances—0.546.
8. *Archiv. f. Gyn.* Bd. 11 S. 527.
9. " " " 16 S. 286.
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11. " " " 9 " S. 71.
12. Over het ontstaan van kysten in de placenta.
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Another victim of the faith cure habit has been reported from Bridgeport, Del. Nathan Dorsey, of that place, a Christian science "sanctificationist," died September 1st, a martyr to his faith. Verily he hath gone to his reward. Let him R. I. P.

BLANKET WAS NOT CURED.

The astonishing virulence of smallpox is clearly illustrated by a letter written by Dr. G. E. Tyler, Secretary of the State Board of Health, relating an incident heard by him during a trip of investigation in New Mexico. The absolute necessity for taking proper measures to destroy all infected property must be plain to anyone who reads his brief account of the Mexican girl's experience:

"In the fall of 1898 a Mexican family living at Amargo, N. M., had the smallpox. Whether they ever disinfected or not I could not learn. At any rate, they put a Navajo blanket that had been used in the family during the smallpox scourge out in the sun and weather to 'cure.' I learned from an intelligent Mexican that this certain blanket had been out airing for more than a year. In November, 1899, this family had some company, and requiring more bedding, debated about using this blanket, and finally agreed that it would be safe, having been 'curing' for more than a year. Consequently, a little girl was covered with it, and in about ten or twelve days took the hemorrhagic variety and died within thirty-six hours of the onset."

A CRUSADE AGAINST NOISE.

Chicago is enjoying a crusade against noise, says the Cleveland Plain Dealer, and the probability seems strong that a great deal of unnecessary ear disturbance will be relegated out of existence.

The paragraphers are having a good deal of fun with the idea, but the great mass of Chicago people are heartily in favor of the promised relief from blatant discords.

The rules governing the new order of things are not yet submitted, but it may be expected that some of the special regulations will be as follows:

No smoking aloud.

Citizens returning home late at night will be tested with "A noisy noise annoys an oyster."

Do not drop your change in the collection plates at church with a jingling sound. Use bank bills instead.

Girls with large, creaky shoes on their feet are advised to soak them—the shoes.

Mothers must not spank their children between the hours of 7 p. m. and 7 a. m. If the children are disposed to yell, the mother must secure from the police department a set of juvenile smotherers—warranted sound proof. Highly recommended by the board of health for the use of chronic snorers. All sizes from 6 up.

Persons in the habit of dropping their shoes on the floor of the room above must put rubber cushions on their heels and soles and drop them on a door mat.

Mosquitoes will not be allowed to sing in public without a music permit.

Wolves who howl in the suburbs will be treated to the full measure of the law. So will tree toads. Also crickets.

Tired dogs with loud pants will be rigidly dealt with.

Afternoon whist clubs will be abolished.

Unnecessary thunder will be promptly reported to the grand jury.

THE COLORADO MEDICAL JOURNAL

AND WESTERN MEDICAL AND SURGICAL GAZETTE.

A Monthly Journal for the Medical Profession of Colorado and Adjoining States.

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No. 9.

EDITORIALS.

PATHOLOGICAL WORK IN THE ARAPAHOE COUNTY HOSPITAL.

In the last issue of THE JOURNAL allusion was made to the inadequacy of the provision for pathological and clinical laboratory work in our hospitals. It would seem not out of place to direct the attention of the County Commissioners of Arapahoe County to the excellent opportunity now dependent upon them for a marked improvement in that respect. They are now building an addition to the County Hospital. In that addition some sort of provision is

to be made for autopsy and other pathological work. It would certainly be a great deal easier and less expensive to make that provision properly now than to make alterations later on. It is also just as certain that unless the arrangement of the plumbing and fixtures and the instrumental and other equipment are planned under competent advice, the same egregious failure as heretofore experienced will be the result.

The opportunity for a distinct advance in hospital efficiency presents itself to the Commissioners. Will they

take advantage of it? We would offer two suggestions: First, that not one but all the members of the profession in the city, who are specially qualified in that particular line of work (there are not too many) be consulted as to the proper arrangement and equipment of a department for pathological and clinical laboratory work. Second, that an additional resident interne be appointed to the County Hospital and the services so arranged that each interne shall devote his entire time to that work for a certain length of time. This would entail no unduly great expense, and would at once result in a great improvement in the professional work of the medical and surgical staff.

HOSPITAL DEFICIENCIES.

In all institutions, the conduct and management of which are carried out by persons and not by automatic machines, imperfections must necessarily exist. Human nature in general shows but slight, if any, changes from generation to generation and there is always to be found a considerable proportion of the population which exhibits a decided ability for the display of poor judgment on critical, or even ordinary, occasions, as well as a marked deficiency in the sense of obligation to properly and effectively perform the duties at which they are employed. This latter is specially prevalent, there being very many who consider laziness in themselves no vice and successful shirking and "soldiering" a fine art.

These qualities will necessarily make themselves evident to a greater or less extent in every hospital. Successful management implies the restriction of their manifestation to the lowest minimum compatible with the grade of human nature which can be expected to be represented in the employes. Perfection in that respect is not to be looked for, but any diminution of watchful precaution, or any tendency to condone lapses from the highest attainable standard will certainly result in a multiplication of abuses greatly affecting the actual and also the reputed efficiency of such institutions.

Our attention has recently been called to a few such abuses which, it would seem, should under no circumstances occur. The first is in reference to the relations which should exist between hospital managers and employes and the profession at large. While they may have their special predilections toward certain physicians and surgeons, it would seem to be almost axiomatic that under no conditions should these be expressed to the patients of other members of the profession. It would seem that any hospital, in its own self-interest, would see that such was never allowed, and yet, only recently, a certain surgeon made the statement that during a certain length of time he had sent to a certain hospital, of the staff of which he was not a member, a considerable number of cases, more than all the surgeons of the staff combined, and that his results had been uniformly

good. Notwithstanding this, not a single one of those patients had failed to be informed what a pity it was that he or she was not in the hands of some other surgeon (member of the staff). He has ceased sending patients there. Again, it is common rumor that some members of the profession will not send gynecological cases to a certain hospital lest their ears should be filled with the praises of one of the members of the staff. At a recent gathering of a number of physicians it was asked, with a significant smile, how many were in the habit of sending patients of a certain class to an institution which happened to be the subject of conversation. Silence, followed by laughter, was the reply, the reason therefor being well understood.

The foregoing represents a sin of commission, the prevalence of which is entirely dependent upon the spirit of the management, and is very easily suppressed. In contrast with this are sins of omission, especially in the function of nursing, which have far more widespread and deleterious influence among the public at large. It is difficult for a hospital to maintain a reputation for efficiency in that respect, very easy to obtain the reverse, and that, when once established, is very tenacious of existence and virulence. It needs but a few patients to be the subject of even imaginary neglect to give an institution a hard name among the laity, among which, as it is, there is always a more or less strong antipathy

to hospitals in general. A couple of examples will perhaps not be out of place. For one patient hot air baths were ordered for certain reasons. There were absolutely no provisions in the hospital for their administration, not even an alcohol lamp, and the physician, instead of being promptly informed of that fact, was permitted to remain in ignorance of it, and in the belief that the patient would receive the treatment prescribed, until the following evening. Not until two days later were provisions made for carrying out the order. Then absolute instructions were given that under no circumstances whatever should the patient be left alone while in the bath. The nurse (the hospital had no training school connected with it and did not employ graduate trained nurses) with folded hands and downcast eyes replied meekly, "Yes, doctor," and the physician took his departure. Returning in a few minutes he found the patient undergoing the treatment in perfect privacy. As the apparatus provided was very primitive, serious results might have occurred. In another hospital a patient in early convalescence from a laparotomy, the first attempt at sitting up having been made a few days before was placed in a chair, out of reach of the call bell, insufficiently covered, the window being open, and the nurse took her departure to attend to other duties. Time passed on, the previous limit being long exceeded, without the reappearance of the nurse, and the patient

began to get tired and cold and nervous. Finally, when the patient was verging on hysteria and collapse, the nurse came, was informed of her condition by the patient, who requested that she be immediately put to bed and provided with hot-water bags. The nurse went off to prepare the latter and call the porter. However, it was not until after the lapse of a considerable length of time that the patient was returned to bed and the nurse did not reappear with the hot-water bags for more than an hour afterward. On another occasion, an ointment having been ordered one evening for the relief of the chafing of bandages, it was not applied until the next evening just a few minutes before the surgeon's call. Again, an enema ordered for a certain hour was not given until five hours later. Is it any wonder that that patient was dissatisfied? Would it be at all remarkable if she were to discuss such occurrences with her friends and they with theirs?

Such abuses quickly give an institution a bad name. It is impossible for them to be entirely eliminated. Eternal vigilance is the price for their restriction within minimal bounds. In some hospitals a much higher organization of the working management must occur before even a reasonable approximation to perfection can be attained.

THE WOMAN PHYSICIAN AGAIN

The editorial in the July number of THE JOURNAL has produced at least a

ripple on the surface equanimity of the women physicians of Denver. We are informed that they are indignant, and various communications have reached us to the following effects:

1. In the editorial the women physicians are judged by the same standard as the men, when, as a matter of fact, that should not be the case. That a large proportion of the women are poor when they have completed their medical courses, and that the same attention is not paid to them as would be if they were better able to dress well. That it is far better for them to get a practice, be able to drive a horse and buggy and wear better gowns, and then when they do present papers before the societies, they will be listened to with more interest.

2. They are not treated on the same footing as men. A prejudice is felt and exhibited toward them because they are women, and they are therefore not given the same opportunities for professional progress as the men.

3. "Stop my paper."

4. The Denver Clinical Society withdraws the reports of its proceedings from the pages of THE JOURNAL.

To these we make reply, as follows:

1. In the editorial mentioned the same standard was indicated as applicable to both sexes in the profession, and in our judgment that is the only correct position to take. It is not true that a horse and buggy or a fine gown will make a medical paper more interesting to a society of physicians nor

cause more attention to be paid to it. On the floor of a medical society each individual stands on the same level, the paper is judged by its contents solely. It does not take the members long to determine for themselves whether this or that speaker is worth listening to, and the attention paid is determined by no other criterion.

2. It is very natural that a prejudice should exist in the profession at large against women physicians. That the women must know before they enter upon the study and must be prepared to meet and overcome. They need expect no favors on account of their sex when they enter the medical arena. They have no right to demand special consideration. They must earn for themselves by their own professional attainments, combined with womanly qualities, that professional respect and consideration which will not be effusively thrust upon them, and in so far as they do not accomplish that, they must consider that they have failed.

3. This is unanswerable. Compliance is all that is left us. While we welcome the support of all members of the medical profession we would not for one moment force THE JOURNAL upon a petulant, unwilling subscriber. Vale!

4. The tingling sting of the lash does not always incite to additional effort, but occasionally has the opposite effect, a balk being the result, even the finest Percheron lying back in the harness and refusing to pull. The real spirit and purpose of the editorial seem to

have escaped the members of the Clinical Society. They should remember that bitter tonics are often very beneficial. We desire to do all in our power to advance the interests of all the medical societies of the Rocky Mountain region, but must reserve to ourselves the right to the untrammelled expression of opinion on any subject. This we cannot allow to be restricted in any way by subscriber, medical society or advertiser. We do not always agree with the sentiments expressed by our contributors, but have never allowed that to be the criterion governing the acceptance or rejection of their communications.

There can be no reasonable ground for indignation on account of the editorial, unless its representations were false or it was inspired by malice or other evil motives. The latter is certainly not the case. As regards the former, we will be more than glad to be shown our error, and willingly place the pages of THE JOURNAL at the disposal of the society for that purpose. For any element of untruth in it we are ready to make the most ample apology as it was unwitting and unintentional.

Recently some of our homoeopathic friends exploited in the daily press the favorable effects of the use of the Roentgen rays in the treatment of a case of gastric carcinoma. Still more recently it was noticed that the patient had died of the carcinoma.

OPENING EXERCISES OF THE DENVER COLLEGE OF MEDICINE.

The opening exercises of the medical department of the University of Denver were held at ten o'clock on the morning of Tuesday, September 11th. In the absence of Dr. E. C. Rivers, the Dean, Dr. Charles A. Powers, the Vice-Dean, presided. Dr. Powers briefly alluded to the history of the college, recent changes in the faculty and improved provision which has been made for clinical and laboratory work. Through the efforts of Dr. Rivers a considerable sum of money has been raised for the endowment of the laboratories. This endowment will be increased. A hospital in close connection with the college building is urgently needed and will be provided as time goes by. The department of anatomy has been materially strengthened. It has been placed in charge of Dr. S. B. Childs, formerly surgeon to the Hartford Hospital. He will be assisted by Dr. E. F. Dean, a graduate of the school of some years standing and an ex-interne of St. Luke's Hospital. These gentlemen will be aided by an efficient corps of assistants. Improved apparatus has been added in the department of anatomy and this important branch will be taught most thoroughly in the coming year.

The other departments of the school

remain in charge of their former incumbents, with the exception of pathology where Dr. J. A. Wilder, replaces Dr. W. H. Bergtold, whose private practice compells him to give up the work to which he has devoted many years.

At these opening exercises further addresses were made by Dr. Henry A. Buchtel, Chancellor of the University, Dr. Henry A. Sewall, Secretary of the College, Dr. H. T. Pershing, professor of nervous and mental diseases, and Dr. T. J. Gallaher, professor of diseases of the nose and throat.

The scholastic term at this college has been lengthened to eight full months and the requirements for entrance and for graduation have been materially strengthened. These steps have been taken in order to comply with the stringent laws which are now enforced in other states, particularly in New York and Pennsylvania. Students who have spent one or more years in this school, or who have graduated from the Medical Department of the University can go to any state in the union and so far as legal requirements are concerned stand on a par with students from any medical school in the country.

The class in attendance at the college is the largest in its history and the prospects for the coming year are in all ways excellent. Especial attention will be paid to the clinical advantages accorded the students.

Bulletin of the Colorado Medical Library Association.

Devoted to the interests of Medical Libraries in the West.

HENRY SEWALL, M. D., President,
LAURA LINDBERGH, M. D., Treasurer.CARROLL EDSON, M. D., Secretary.
CHAS. R. DUDLEY, Librarian.

NO. 21.

SEPTEMBER, 1900.

An effort has been made to have the books and magazines in the Medical Department easier of access. For the bound journals guides may be found at the ends of the cases indicating what journals may be found in each section, and each section is lettered A, B, C, etc. For the books, guides may also be found in the ends of the cases, showing that "610-3" is the class number for Dictionaries, and "611" for Anatomy, etc.

The current magazines will be found in the cases of pigeon-holes, case No. 1 containing the most important journals. The other cases, numbered 2 and 3, are in process of changing, but they will include all such other medical journals as are judged worthy of a separate pigeon-hole. We have been re-

ceiving about two hundred or more journals, more than half of which are never consulted, so it is useless to give them valuable room, as we have none to spare.

The volumes which were completed for the first half of 1900 have been sent to the bindery.

The books which were given to the Association from the estate of the late Dr. E. R. Axtell are now being catalogued.

During the past month the following new books have been purchased by the Library: Albutt's System of Medicine, vol. 7; Nothnagel's Specielle Pathologie and Therapie, vols. 5, part 1, and 7, part 1, and Barker's Nervous System.

ZOE GUERNSEY.

Colorado State Board of Health.

In compliance with the regulations adopted by the National Conference of State and Provincial Boards of Health at Toronto in 1886 and Washington in 1887, it becomes my duty to inform you that SMALL POX has been reported to this office from the following points in the State of Colorado during the month ending August 31st, 1900:

Brighton, Arapahoe County, 2 cases, July 8th and 28th.

Denver, Arapahoe County, 11 cases, July 28th to Aug. 26th.

Edwards P. O., Eagle County 2 cases, July 15th.

Georgetown, Clear Creek County, 5 cases, July 3d to Aug. 1st.

Golden, Jefferson County, 11 cases, July 27th to Aug. 26.

Glenwood Springs, Garfield County, 1 case, Aug. 4th.

Huerfano County, 2 cases, July 16th

and 25th.

Idaho Springs, Clear Creek County, 1 case, Aug. 2d.

Lake County, 1 case, July 10th.

Nevadaville, Gilpin County, 1 case, Aug. 23d.

Park County, 2 cases, July 3d.

Parachute, Garfield County, 20 cases, June 19th to Aug. 3d.

Pueblo, Pueblo County, 1 case, Aug. 21st.

Rocky Ford, Otero County, 3 cases,

Aug. 3d and 4th.

Trinidad, Las Animas County, 5 cases, Aug. 2d to 28th.

Walsenburg, Huerfano County, 3 cases, Aug. 21st to 23d.

Total for the State of Colorado for the month ending August 31st, 1900, 71 cases.

No deaths.

Yours truly,

G. E. TYLER,

Secretary.

SOCIETY REPORTS.

Otero County Medical Society.

At the second annual meeting held in La Junta, September 11, 1900, the following officers were elected for the ensuing year:

President, Dr. Frank Finney, La Junta;

Vice President, Dr. E. W. Kearby, Rocky Ford;

Secretary and Treasurer, Dr. H. A. Armstrong, La Junta;

Executive Committee, Drs. William Dow, H. G. Sigman and W. W. Reed.

Meetings are held on the second Tuesday of each month in La Junta. There is now an active membership of about twenty. The meetings are well attended and characterized by numerous enthusiastic papers and discussions. At this meeting the following papers were read:

"The Etiology and Pathology of Typhoid Fever," by Dr. William Dow, of La Junta.

"Typhoid Fever in Infancy and Childhood," by Dr. G. W. Phillips, of La Junta.

"The Treatment of Typhoid Fever," by Dr. W. W. Reed, of Fowler.

[NOTE.—The Society has prepared a very tasty and interesting program for their work during the coming year. Printed upon a dozen cards, bound together as ball programs, it is very attractive in appearance. On the first is given a list of the officers; on each of the others is a program for a single meeting, giving the titles of from two to eight subjects of papers, with always the line "General Discussion by Members of the Society." The example of this society can be commended to a good many others. We hope to have regular reports of its proceedings with abstracts of the papers and discussions. —ED.]

Pueblo County Medical Society.

The annual meeting of the Pueblo County Medical Society was held on the evening of September 4, 1900, President Bulette in the chair.

The treasurer being absent, no report of the financial condition of the society was given.

The secretary's report, as follows, was read and accepted:

Number of regular meetings.....17

Number of special meetings..... 1

Total number of meetings.....18

Average attendance.....11 1-9

Number of papers read 17

Number of cases shown 4

Applications received..... 3

Losses in membership—

By death 1

By removal from county..... 4

Present membership—Active.....31

Honorary 17

Voluntary paper by Dr. W. B. Davis; subject: "When is Contract Practice Unethical?"*

The following officers for the ensuing year were elected:

President, Dr. Luke MacLean;

1st Vice President, Dr. R. C. Robe;

2d Vice President, Dr. C. V. Marmaduke;

Secretary, Dr. H. A. Black;

Treasurer, Dr. W. H. Campbell;

Librarian, Dr. W. W. Bulette.

*Will appear in an early number of THE JOURNAL.

NEWS ITEMS.

Dr. M. Beshoar, of Trinidad, Colo., has been appointed member of the Colorado State Board of Health, vice Dr. A. B. Harbison, resigned.

there were twenty-six who took the examination, this shows a commendable degree of severity on the part of the examiners.

At the meeting of the State Board of Pharmacy held Friday and Saturday, September 8th and 9th, the following passed as registered pharmacists: Arthur L. Beals, Charles F. Benton, Jos. W. Laughlin, F. O. Robertson, W. C. Wendt, Denver; Erick V. Buddenbrock, Trinidad; Harry H. Hudson, Colorado Springs; H. C. Miller, Hotchkiss. As

Revised rules for the prevention of tuberculosis have been issued by the State Board of Health. The circular lays down rules in regard to the expectoration, to the care of the sleeping apartments and clothing of the patient, and to the food to be eaten. The circular embraces both valuable information for the consumptive, for those pre-

disposed to the disease and to those who associate with consumptives.

The following is taken from the *Houston Times-Herald*:

HOUSTON, TEXAS, Sept. 6, 1900.—Hon. John G. Tod, Judge Eleventh Judicial District, Houston, Texas: Dear Sir—A recent decision of the Supreme Court of Texas convinces us that the laws governing the practice of medicine in this State are inadequate and inoperative.

Our towns and cities are rapidly filling up with medical impostors from all parts of the country, and we find ourselves powerless to prevent it, for the reason that, under the present law, a diploma from a bogus medical college is entitled to the same recognition as one from the best institutions. The original intention of this law was to protect the people from persons wishing to practice medicine who were not properly qualified. This it completely fails to do. And to remain as an examining board under such circumstances, we feel would make us a party both to fraud and a farce. Therefore we, the members of the Eleventh Judicial Medical Examining Board, do most respectfully tender our resignations.

J. W. SCOTT, Pres't,
G. W. LARENDON, Sec.
S. C. RED,
W. A. ARCHER,
J. B. MASSIE,
J. M. BOYLES,

District.

It would perhaps not be a bad idea if those of Colorado would follow this ex-

ample and let our Governor appoint some of his favorite Christian scientists, magnetic healers, osteopaths and other fakes in their places. It might be a little hard on the health of the dear public, but would be an object lesson worth giving.

The suit of W. A. Shepard, an advertising physician, against Dr. W. A. Campbell of Colorado Springs for slander, was non-suited on August 1st. The claim was made that Dr. Campbell had injured the plaintiff to the extent of \$30,000 by making derogatory statements concerning the dangerous character of the spirometer treatment for tuberculosis as administered by Dr. Shepard. One or two patients had had hemorrhages after using the treatment.

The prosecution utterly failed to establish a case, while the chief defense of Dr. Campbell—that what he had said was privileged, being uttered in the performance of his duty as a practitioner of medicine,—seems to the non-legal mind to be a good one.

The profession of Colorado Springs backed Dr. Campbell to a man for his course had certainly been an absolutely blameless one. Dr. J. N. Hall of Denver was in attendance as witness in Dr. Campbell's behalf. The non-suiting of the case by Judge Stimson ends it handsomely for the present, and it is not probable that it will be carried to a higher court in spite of the appeal taken. Judgment for costs of suit was entered against the plaintiff.

At Gilman, Ill., a sixteen-year-old girl named Dessie Salter, died August 24, of malpractice, claimed to have been at the hands of a Mrs. Dr. C. M. Wright. A warrant was sworn out against the latter, August 26, and a crowd went with the constable to serve it. They were fired upon from the house, used as a lying-in hospital, and one man killed and several wounded. An attempt was then made to set fire to the hospital. This failed, but the next day the inmates were routed out, one killed, and Mrs. Dr. Wright very severely wounded.

The next meeting of the Rocky Mountain Interstate Medical Association will be held in Denver in 1901. At the recent meeting in Butte, Mont., the following officers were elected:

President, Dr. C. K. Fleming, Denver.

First Vice President, Dr. H. D. Niles, Salt Lake City.

Second Vice President, Dr. F. W. McCrimmon, Butte, Mont.

Treasurer, Dr. Charles G. Plummer, Salt Lake City.

Recording Secretary, Dr. E. P. Hershey, Denver.

Corresponding Secretary, Dr. S. D. Hopkins, Denver.

Board of Trustees, Dr. T. J. Murray, Butte; Dr. James Carter, Wyoming; Dr. W. R. Pike, Utah; Dr. Charles H. Jones, Arizona; Dr. J. H. Bean, Idaho; Dr. A. M. Holmes, Colorado.

Dr. John B. Murphy has accepted a Professorship in Surgery and Clinical

Surgery in the Northwestern University Medical School; Chicago Medical College. He has been appointed Surgeon-in-Chief of Mercy Hospital with the direction of the surgical teaching in that hospital. He will give two clinics each week at that hospital. The hospital now contains 260 beds with abundance of clinical material. A new amphitheatre with a seating capacity of 300 is in process of construction.

Dr. Archibald Church has been recently appointed Professor of Nervous and Mental Diseases in Northwestern University Medical School, Chicago Medical College, and head of the Neurological Department.

The meeting of the Southern Surgical and Gynecological Association will be held in Atlanta, November 13, 14 and 15, under the presidency of Dr. A. M. Cartledge, of Louisville. Prospects are splendid for a successful session. Members of the medical profession are cordially invited to attend.

W. E. B. DAVIS, Secretary.

Reprints received from:

Wm. Krauss, Ph. G., M. D., Memphis, Tenn.

E. Stuver, M. S., M. D., Ph. D., Fort Collins, Colo.

C. D. Spivak, M. D., Denver, Colo.

Edward Jackson, A. M., M. D., Denver

George Ben Johnston, M. D., Richmond, Va.

Samuel E. Earp, M. S., M. D., and John T. Scott, Indianapolis, Ind.

Thomas H. Manley, M. D., New York.
 Merrill Ricketts, M. D., Cincinnati, O.
 Thomas E. Satterthwaite, M. D., New York, N. Y.

John E. Summers, Jr., M. D., Omaha.
 Byron Robinson, B. S., M. D., Chicago.
 Clarence Quinan, M. D., San Francisco.
 Albert L. Bennett, M. D., F. E. S., Denver, Colo.

Edmund Cone Brush, A. M., M. D., Zanesville, O.

Lieut. Col. Henry Lippincott, Denver.
 Dr. R. C. Coffey, Portland, Ore.

" E. J. A. Rogers, Denver, Col.

" A. D. Mekenson, Lincoln, Neb.

" Jno. H. Musser, Philadelphia, Pa.

" Henry Waldo Coe, Portland, Ore.

Drs. Chas. K. Mills, W. W. Keen and W. G. Spiller, Philadelphia, Pa.

DEATHS FROM LIGHTNING.

Statistics collected with much accuracy and care by the Weather Bureau at Washington, acquaint us with the rather startling information that during the year 1899, there were killed by lightning in the United States five hundred and sixty-two persons, and eight hundred and twenty others were more or less severely injured. The mortality from this source is much larger than the average person would suppose. There is a popular belief that persons are seldom or never struck by lightning in the open air. Yet of the deaths enumerated about 45 per cent occurred away from shelter. Thirty-four per cent were killed in houses, while beneath trees only 11 per cent.

Thus is another myth of our childhood days destroyed. The most dangerous locality in a thunderstorm is in the vicinity of a wire fence. Quite a number of deaths occurred in persons who subjected themselves to this danger, and in persons who were in the act of removing clothes from wire clotheslines. The safest place in the house is in the center of the room. Open doorways and open windows should be avoided, as well as the neighborhood of chimneys. It is well to avoid the shelter of trees, and the proximity of live stock. On many of the persons killed the lightning left no mark. In some cases there were burns, either upon the body or clothing, or both. In some instances the clothing was burned while the person escaped serious injury. The vagaries and eccentricities thus displayed by the lightning stroke are hard to account for.

NO WONDER THEY FLED.

An authority upon chemistry was lecturing before a well-known woman's club and illustrating his remarks with experiments. All went well until he paused a moment and then said: "I am very sorry, but I must ask any of the ladies who use face powder containing bismuth to leave the room during this experiment, as the gases I am about to set free have a peculiar affinity for bismuth and turn it purple."

Whereupon the entire audience save three courageous sisters rose and fled from the room.—St. Paul Globe,

BOOK REVIEWS.

A PRACTICAL TREATISE ON SEXUAL DISORDERS OF THE MALE AND FEMALE. By Robert W. Taylor, A. M., M. D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons, New York; Surgeon to Bellevue Hospital and Consulting Surgeon to the City Hospital, New York. Second edition, thoroughly revised, with 91 illustrations and 13 plates in color and monochrome. Lea Brothers & Co., Publishers. New York and Philadelphia.

This work is one containing much of interest to the general practitioner, as well as the genito-urinary specialist. It has been largely re-written and is well written. It may also be commended for the care with which the illustrations have been chosen, their perspicuity and their pertinence to the subjects under discussion. After very clearly written chapters on the anatomy and physiology of the male sexual organs, the various forms of impotence in the male, psychic, symptomatic, atonic and organic, are interestingly described. Then come the causes of sterility, azoospermatisms and aspermatisms, followed by chapters on the chronic inflammations of the bulbous and prostatic urethra, stricture, affections of the prostate and seminal vesicles, and varicocele. Not less well handled are the allied subjects of masturbation in the male, coitus reservatus, sexual excesses and erehrism, with their results, spermatorrhoea, sexual neurasthenia and priapism. The discussion of sexual perversion is scarcely

up to the general standard of excellence of the rest of the work. The various chapters on the sexual disorders in the female form one of the most interesting portions of the book. Throughout the work the subject of treatment is treated concisely, perhaps too much so, but with great clearness, and the practical points especially well elucidated.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS By Dr. Roberts Bartholow, M. A., M. D., LL. D., Professor Emeritus of Materia Medica, General Therapeutics and Hygiene, in the Jefferson Medical College of Philadelphia etc., etc. Tenth edition, revised and enlarged. New York: D. Appleton & Co.

Dr. Bartholow has given to the public the tenth edition of his standard Materia Medica. The entire text has undergone revision, and chapters on the important animal extracts and serum therapy have been added, thus fulfilling a long felt want for an up-to-date Materia Medica. The revision of the former editions has carefully eliminated all questions of speculation as to the physiologic action of drugs, and cites the accepted results of the recognized laboratories. As a work on toxicology it is complete without becoming burdensome as to the various dangerous chemical formations of ingested toxic drugs.

In view of the new edition of the pharmacopoea, which will be shortly

published, Dr. Bartholow's work should be a valuable text for comparison, as it holds strictly to the therapeutic value of the drug *per se*, and is not influenced by the pseudo market value dependent on commercialism.

DISEASES OF THE NOSE AND THROAT.

By J. Price Brown, M. B., L. R. C. P. E., Member of the College of Physicians and Surgeons, Ontario; Laryngologist to the Protestant Orphans' Home, Fellow of the American Laryngological, Rhinological and Otological Society, Member of the British Medical Association, the Pan-American Medical Congress, the Canadian Medical Association, the Ontario Medical Association, etc. Published by F. A. Davis & Co., New York, Chicago and Philadelphia.

This work has been written, not as a text for the student or especially for the specialist, but rather as an aid to the general practitioner. It embodies the points of greatest interest to the doctor at large, containing as it does the clinical results of a thirty years' practice in general and special medicine. It possesses an admirable classification and abundant illustrations, which always prove useful to the busy doctor who must put his finger at the unexpected time on a subject of reference.

ATLAS AND EPITOME OF SPECIAL PATHOLOGICAL HISTOLOGY.

By D. cent Dr. Herman Duerck, Assistant in the Pathologic Institute: Prosector to the Municipal Hospital L. I. in Munich. Authorized Translation from the German. Edited by Ludvig Hektoen. M. D., Professor of Pathology in Rush Medical College, Chicago, Circulatory Organs, Respiratory Or-

gans, Gastro-intestinal Tract. With 62 colored plates. Price \$3.00 net. Philadelphia, W. B. Saunders, Publisher. 925 Walnut St. 1900.

The critic has been looking for this work with considerable interest. To say that it fully satisfies his expectations is hardly saying enough. It is fully the equal of the other members of the series of Medical Hand Atlases. The mechanical work is most excellent. The plates, containing 129 figures in colors, are superb. The text and the notes to the plates from a most lucid exposition of the principles of special pathology of the subjects mentioned. Too much commendation cannot be given to the work. The plates form a magnificent collection of pathological microscopical preparations for the examination of which no microscope is necessary and previous microscopical training not an absolute essential. Of course, the greater one's previous experience with practical pathological work the greater will be his enjoyment of this book and the greater will be the benefit derived from it, but it forms a remarkably good introduction and home instructor to any one who wishes to enjoy the benefits of a knowledge of the subject and cannot take a practical course under a living instructor. Ignorance of pathology condemns a man to mediocrity or less in the profession of medicine. A work of the excellence of this one at its price commends itself to every intelligent practitioner. We trust that the other volume on special pathology and the one on general pathology will make an early appearance.

THE COLORADO MEDICAL JOURNAL

...AND...

WESTERN MEDICAL AND SURGICAL GAZETTE

A Scientific Medical Journal, Published in the Interest of the Profession of Colorado and Adjoining States—A Journal of Science, of News and of Medical Lore.

VOL. VI.

DENVER, COLORADO, OCTOBER, 1900.

No. 10

ORIGINAL COMMUNICATIONS

Reminiscences of a Physiologist

AN ADDRESS DELIVERED TO THE STUDENTS OF THE DENVER COLLEGE OF MEDICINE, SEPTEMBER 13, 1900.*

SIR MICHAEL FOSTER, K. C. B., M. D., F. R. S.

Ladies and Gentlemen—When my old friend, whom I am proud to call my old pupil, Dr. Sewall, asked me soon after my arrival in Denver whether I would be willing to say a few words to you, I, who have always suffered all my life from the inability to say "no," at once said "yes." But I must confess that I am not "in good form" to make you a formal address. I am "on the tramp" over your vast continent and making east as fast as ever I can. All that I can offer you this morning is some very rambling, gossiping chat.

Dr. Sewall has suggested that I should say a word or two about early days. It was in the year 1854 when I began my medical studies; but I had the year before attended a course of lectures on physiology, breaking into my ordinary studies in order to do that, and my teacher was a man by the name of William Sharpey,—a very great man, but a

man whose name, perhaps, will not occupy the place as that of a great physiologist which it really deserves. Those of you who have studied the structure of bone will remember his name under the title "Sharpey's fibres." Indeed, he was one of the first to give an accurate description of the true structure of bone. He was at that time the only pure physiologist in England. He had acquired a very great reputation many years before, in the early '30's—I forget the exact year, '32 or '33, I think—by discovering cilia. Before that time all the movements which are produced by cilia were a mystery. And almost in the same year Valentin, who was professor of physiology at Bern, and Sharpey, who was at that time teaching anatomy at Edinburgh, discovered cilia. It is worthy of note that both of them discovered these cilia, not with the compound microscope, but with the

*This address was given without notes, and was practically extemporaneous.—EDITOR.

simple lens. That gave them at that time far more trustworthy results than the indistinct or untrustworthy images which were gained by the compound microscope. Sharpey may perhaps be known to you also as the editor of a book, which for years and years has been and still is a standard work on anatomy in England, Quain's Anatomy, which deals not only with topographical anatomy, but also with minute structure, with what we now call histology; and Sharpey was the first man to teach histology in a thoroughly systematic manner in England. There had been in years before, in the '40's, a man who did most remarkable pieces of work in histology, one on muscle and the other on kidney, William Bowman, works which remain to the present day classical works on both those tissues; but he, already in 1850, was a practical surgeon, had a large practice in ophthalmic surgery, and had to abandon the active pursuit of physiology. Sharpey was the only man at that time who devoted his whole life to physiology. In all the other schools physiology was taught by practicing physicians and surgeons. He had had a long experience, a long training; and when I tell you that Sharpey was the pupil of Rudolphi, the greatest physiologist in Berlin at the end of the last century and the beginning of this, the master of Johannes Mueller, who really began modern physiology, and whose pupils were Helmholtz, Ludwig, du Bois Reymond and others, you will recognize that his name carries one a long way back.

Now Sharpey was, at the time I am speaking of, the greatest

physiologist in England, the only person who devoted his whole time to science; and yet even he taught physiology entirely by lectures. He had no physiological laboratory. He had no physiological apparatus whatever. All he did in the way of practical teaching at that time was to show us under the microscope preparations of the various tissues. There was no attempt whatever at any practical teaching of physiology. I remember very well that when he was lecturing on blood-pressure, and was describing to us the then new results of Ludwig, endeavoring to explain to us the blood-pressure curve, all he had to help him was his cylinder hat, which he put upon the lecture table before him and with his finger traced upon the hat the course of the curve. That was the way that physiology was taught by Sharpey in England in the year 1854. And yet Sharpey taught it as nobody else taught it. Nobody else in England then was teaching physiology as Sharpey taught it, and, as I tell you, he used his hat, and a very old hat it was, as a kymographion, for blood pressure.

I very well remember going to him one day after his lecture, in which he had been speaking of the functions of the liver (by that time he had recognized that I had a special interest in physiology), and he said to me, "Well," he said, "I didn't like to say anything about it in my lecture, but Claude Bernard in Paris has just sent me a paper which he has read before the Academy of Sciences at Paris, and in that paper he has proved that there is present in the liver a substance resembling starch, which is easily converted into sugar." I said to

him, "Good gracious, that is something quite new, isn't it?" And he said, "Yes, and probably next year in my lectures I shall be able to tell the rest of the students about that, but I thought you would like to hear about it." That was Claude Bernard's discovery of glycogen.

Well, after I had taken my qualifications and become "a healer of the sick," I went into practice for about six years. Some of my patients liked me. I myself wondered very much at it. I am very thankful that I did no more mischief than I did during those six years of practice. After those six years I was called back to London, and by that time there had been some change. At University College, one of the medical schools connected with the hospitals in London, and one which was certainly at that time in advance of many of the other medical schools, they had, with the help of Sharpey, who was then becoming an old man, established a lectureship on practical physiology, not a full professorship, but a mere lectureship, a subordinate position which was held by Dr. George Harley, who did some very good work in his time. That was the first attempt in London to teach physiology in a practical manner. Just about the same time Dr. William Rutherford, whose name is probably familiar to some of you, especially for his work on the vagus nerve, began, under Professor Hughes Bennett, to teach practical physiology in Edinburgh. I was called to succeed Dr. G. Harley as teacher of practical physiology. That was in the early '60's, in about '64 or '65. But what could be

done then was very little. I had a very small room. I had a few microscopes. But I began to carry out the instruction in a more systematic manner than had been done before. For instance, I made the men prepare the tissues for themselves. That was a new thing then in histology. And I also made them do for themselves simple experiments on muscle and nerve and other tissues on live animals. That, I may say, was the beginning of the teaching of practical physiology in England, which has become what it is in the present year in the years that have elapsed between then and now.

Now, I came up to London from the country. I had been a country doctor, a doctor in a small country town where I used to work at my physiology whenever my patients would leave me alone. I came up to London and began this course of lectures on practical physiology. I appointed a time to see the few who wished to enter upon my course. That course was absolutely voluntary. In England, as here, I suppose, certain courses are compulsory. Anatomy was then compulsory, the ordinary lectures on physiology were compulsory, and other lectures were compulsory; but these lectures on physiology were absolutely voluntary, and only the better students were willing to give up the time needed to get a more thorough grasp of physiology. Well, I appointed a time to see the few who wished to spend some time in this new study, this study of luxury, and there came to me a boy, nothing more than a boy, at least he looked a boy, who said, "I am very sorry, sir; I

should like to take your course if I could, but you see my parents are not very well off, and I get my board and lodging by living with a doctor close by." Doctors in England then, as indeed they do very largely now, dispensed their own medicines. I mean, when they saw a patient they sent in afterwards the medicines required. In those times medicines were not so compendious as they are now; the doctor could not take the whole pharmacopœia about in a little case. He, either with his own hand or by help of an assistant, had to do a good deal in the way of preparation of medicines, making infusions, decoctions, rolling pills and making up mixtures and draughts, doing all the things which went under the general name of dispensing. The lad I am speaking of said to me: "I have, in return for my board, to dispense all the doctor's medicines, and that dispensing takes me always from 2 to 5; now your lectures begin at 4. I cannot come for the first hour. You go on to 6. May I come in for the second hour? I will work hard and will try to make up the lost time." I said, "Certainly, certainly." So he came in, came in regularly late. The other boys rather laughed at his coming in late. He came in regularly at 5 o'clock, and he worked with such purpose that in the examination which I had at the end of the course I awarded him the prize. Well, his name was Henry Newell Martin, and I was so much struck with him that I asked him to assist me in my course, and he became my demonstrator. After we had been at University College together I think two or three years,

Martin carrying on his studies and at the same time helping me, he came one day to me in great trouble because he could not make up his mind. He obtained what they called a scholarship at Christ College at Cambridge, and he could not make up his mind to accept it and go there. He said he didn't want to leave me. But I was able to tell him what nobody else knew at the time, that in the October in which his scholarship would take him to Cambridge I was going to Cambridge too, having been invited to be a lecturer on physiology there. So we both went to Cambridge at the same time, and he became at Cambridge at once my demonstrator, as he had been in London. And after a career of considerable brilliancy of some years at Cambridge there came to him an invitation to Johns Hopkins University at Baltimore. So, if I have done nothing more, at all events I sent Henry Newell Martin to America. (Applause.)

Well, now, I cannot talk about medicine generally, but perhaps I may say a few words about the examinations which were held in those days for entrance into the profession. Examinations form a subject of contention. There is a good deal to be said on one side and on the other side. I think there is no doubt that examinations are necessary, but I think also that in England, at all events, and possibly here, examinations are often abused. Examinations, instead of being made, as they ought to be made, simply an inducement to proper study, become an inducement to that which is sometimes called study, but which is not study at all, which in

England we call simply "cramming up," by which a lad often passes the examination without knowing anything really of the subject on which he is examined. I remember talking to a man whose duty it was to prepare and fit—I hardly know whether I should say fit or unfit—people for examinations. I think it was the examination for entrance into the army in England. One day the list came out and the first four men on the list were all his pupils, and I congratulated him. I said, "You have done very well this time; all these four men are your men." "Oh," he said, "I am not proud of that. Those were clever boys and they knew their subjects. What I am proud of is number eighteen; he has passed, but he knows absolutely nothing whatever about it." (Laughter.)

Now, as I said, I went down into the country authorized to take care of the sick, and my authorization took place in this wise. Before I had entered the profession I passed a preliminary examination to show that I knew a little Latin, a little Greek, a little arithmetic, and a little geography, or something of that kind. Then I had to attend regular courses of study for three years. At the close of these I "went up," as we say, to the Royal College of Surgeons. The diploma is issued by that body, which is simply an examining body. It doesn't teach at all. Diplomas are issued by it, and nearly every doctor in England becomes a member of the College of Surgeons. Nowadays he usually becomes at the same time a member of the College of Physicians; but a change has taken place since my time. At that time

many men had as their sole qualification the diploma of the Royal College of Surgeons. I proposed to take my degree of doctor of medicine in the University of London; but like many others, I desired to have as well this diploma of the College of Surgeons, which was the usual qualification to practice medicine. The examination for that diploma I underwent at the end of my studies. It took place in the evening. I think we went there about 7 o'clock in the evening. At about 8 o'clock a bell rang and four of the candidates were sent in to be examined.

The examination to some of us, I am sure, was anything but easy. I have a distinct recollection of a man, one of my fellow candidates, who had already been up several times for the examination before. As we were waiting for the examination we talked, of course, about the possible questions and the proper answers, and the man in question asked us: "Now, what answer would you give to this question: 'If a man got between the buffers of an engine what would be the injury which would result?'" Well, we all talked about rupture of the liver and a variety of things. "Oh, no," he said, "that is not the answer. What you have got to say is, 'there will be an ecchymosis.'" I believe he was rejected on that evening, as he had been on previous evenings.

The examination was conducted in this way. We four were ushered into a room, and there sat at four tables eight men, two men at each table, who seemed to us to glare at us as we were ushered before them. Then each of us sat at a table, and I found I

was being examined in anatomy by a man who was an eminent surgeon. He asked me questions in anatomy and I went on struggling with my answers. He went on giving me as many questions as he could for a quarter of an hour, and then the bell rang, whereupon it was like a certain game the children play, we all changed tables as rapidly as we could. I got at another table and I found I was being examined in physiology; that was not by a physiologist, but by a physician. The first question he asked me was about the action of the muscles of the larynx. Well, as you know, there are many answers to questions about the action of the muscles of the larynx, and I entangled him into a discussion about the action of those muscles and we went at it for a quarter of an hour, and then the bell rang again. My examiner said, "Good gracious, I have hardly asked you anything." And then I had a quarter of an hour at surgery and afterwards I had a quarter of an hour at pathology, and then we all went out; and that was the examination. We waited for about half an hour or so and then certain names were called, and these had joy on their faces, but the poor fellows whose names were not called went away sadly, for they had not been accepted. We who had been called had an address by the president of the College of Surgeons, and then each had a piece of paper handed to him. On the strength of the result of that one hour I was given leave to work my will on any poor person who had the misfortune to consult me. (Laughter.)

Well, things have changed a good

deal since then, and changed for the better. As I said, the subject of the examination is one thing which requires continual care lest it should defeat its own end.

Now about my other studies. A year or two after I came up to London I was asked to deliver a course of lectures at the Royal Institution, and in talking with my dear old master Sharpey about what I should select for a course of lectures, I cannot remember whether I suggested it to him or whether he suggested it to me, but anyhow we determined that I should give a course of lectures on embryology. Well, I knew practically nothing about embryology, and indeed very little was known in England; certainly very little knowledge was required of the student. There was a man who had worked at it, Allen Thompson, and a great deal of work had been done, of course, in Germany, for Koelliker was hard at work at his embryological researches. He had by that time done a great deal, and was about to issue his well known work on the subject; but in England nobody was working on the subject save Huxley. Huxley had for purely morphological purposes gone very fully into the development of the chick in the egg, and he had written a few papers about it, but beyond him nobody, so far as I know, was then working; at all events at vertebrate embryology. I had learned nothing except what dear old Sharpey had told me in the course in physiology, and I began of course to set to work to learn a little about the subject before I began to lecture on it.

Now what I am about to say just il-

illustrates the progress which has been made since that time. This was in the early '60's. I remember Sharpey telling me (he had worked with Allen Thompson) that the way Allen Thompson and he obtained a new view of the structure of the embryo was to cut the embryo in half with a razor and look at the two cut surfaces with a strong glass. They made no sections whatever, and Sharpey said to me when I began, "You know Huxley tells me that Koelliker has a capital method of getting sections of the embryo. He spreads the blastoderm flat on a glass plate, and then taking hold of each end of the blade of a razor he brings it down again and again on to the blastoderm until he thus cuts the embryo up into a number of slices, and then he takes out the thinnest ones for examination under the microscope. Well, I used the razor to prepare my sections, as that was the only tool for that purpose we then had. But I used also the method of imbedding. I shall never forget the delight of dear old Sharpey when I showed him some sections (horribly rough sections they were. I shouldn't like to have them exhibited now, but I was proud of them at that time) of the embryo hardened and embedded. He was absolutely delighted. "Oh," he says, "I wish Allen Thompson could see those." I believe I was one of the very first in England to use the method of imbedding for microscopical sections. At all events, I was one of the first. It was just about that time that it came into use in England. As you know, what is now the technique of histological examination, how almost absolutely complete and

perfect it is; all that has grown up since I put my hand to the work.

Now I think I will turn to a somewhat different topic. If I may, I should like to say a word or two about vivisection, because that is a subject of very great interest to the medical profession. I should just like to tell you what our experience is in England. I think it was in the late '60's or the beginning of the '70's there was a movement for putting the performance of experiments on living animals under state regulation. By an experiment was meant something done with a view to get the truth, not for any other purpose. The object of the operation must be simply to get at the truth, if so, it was called an experiment on living animals, and it was proposed to put that under state regulation. There was a commission which sat on the subject and reported upon it, and then an act of Parliament was passed as the result of the report of that commission. And I think I may say there was a very general opinion among those who were unbiased that the report of the commission went beyond the evidence, and that the action of the Legislature went beyond the report. I do not believe myself that there was any necessity whatever for such legislation. However, such legislation was carried out.

Now, that legislation consists of two parts, one of which does not put any great restraint upon inquiry, but the other does. One part is that every one who performs experiments on living animals for the purpose of ascertaining the truth must possess a license. Well, there is no great hardship in that. The

application for the license has to be signed by certain persons of repute, and there is no difficulty at all in any person who is capable of carrying out proper experiments on living animals obtaining a license. If there was simply the obtaining of a license, I don't think that act would have had any prejudicial influence at all. But there were other parts to the act. One was that the place in which the experiments were to be performed must be recognized and licensed as a place for performing experiments on living animals. Now that had and still has a very prejudicial effect. The object of that was that the person who was performing the experiments might be subject to supervision by an inspector; an inspector could know where the experiments were being carried on and come down at any time to see whether the experiments were being carried on according to law. Although it had no prejudicial influence upon professional physiologists, it had this, and I think a very bad effect, of proving a great obstacle to men in practice performing experiments with a view of carrying out their research. Before that a surgeon or a physician who was undertaking a research could perform an experiment in his own house, but after that act no one could perform an experiment in his own house unless he had his own house licensed as a place for the performance of experiments, and the licensing of his house made public by a Return to Parliament, and this practically cut off a very large number of active practicing physicians and surgeons from carrying out research. I know that Lister himself,

who did a great deal of his work in his own house, and of the immense value of that work you are well aware, has said that it would have been impossible for him to have carried out his researches if he had had to have carried them out after that act had become the law of the land.

Then there is another thing which is a very great obstacle, and that is that the license will not cover all experiments. It will only cover ordinary experiments. It will, for instance, not cover experiments on cats or dogs or mules or monkeys or horses, and I think some other animals. If you want to perform an experiment on one of those animals, although you have a license to experiment on living animals, you must get, in addition, a certificate for the special experiment which you want to carry out. Now, that license has to come through the government, has to come through what we call the Home Office. I don't know how you do things in America, but in England whenever anything gets into a public office there it remains for a very considerable time before it gets out; and by the very force of circumstances, not by reason of any ill will, since the Home Office, now at any rate, recognizes that our objects are good and gives us every assistance it can to carry out the work when it is clear there is an intent to carry it out as the act was intended to be carried out, but a considerable delay occurs. The certificate system acts in the following way. You have undertaken a research, your license carries you on along a certain line, and then you want to make a special experiment outside

that line. For this you must have a special certificate, and you must suspend the research until you get your special certificate. All of you know that it is impossible to wait and put a research aside without becoming interested in some other subject. I know that I have more than once commenced work in a certain direction, and then have had to apply for a special certificate, and I have put my work aside, and by the time the special certificate reached me I had gone off into some other line and my mind was wholly occupied with that and I never went back to the research for which I obtained the certificate. The certificate was wholly useless.

Now that has occurred to me, and that has occurred to everybody else, and I need hardly say in a research in science it is of the utmost importance that you should be able to take up any subject which comes to you and follow it out at once. You must strike while the iron is hot. You can't do that under the present condition of things in England, and that has, I am very sure, produced a very prejudicial effect upon the progress of physiology in England. Of course, there is the other side of the question. I suppose you don't experience the sort of thing here, but in the rest of the world we are stimulated by difficulties; and I think there can be no doubt that the fact we have to fight against difficulties in the progress of physiological inquiry occasioned by the act has really stirred us up to more active and more earnest inquiry than if the act had not passed; but if the question comes before you, don't you be too much influenced by the beneficial effects

of difficulties. (Laughter.) Resist, as I have said to every one in America, resist interference with your inquiries. I heard the Lord Chief Justice of England, when this matter was being discussed in the House of Lords, I heard him say, "You must remember, my Lords, that this is essentially a penal act." I, a professed physiologist, sat in the gallery of the House of Lords, and heard the highest legal authority state that the Legislature were about to treat me as a felon. They were about to bring into action what he called a penal act. Don't you allow yourselves for a minute to get crippled by all these special certificates.

Indeed, no legislation at all is necessary. I speak not for myself, I speak for all my brethren. We are not cruel. We never cause pain if we can possibly help it, and the whole progress of physiology is dependent upon the experiments upon living animals. The other people may say what they like, but if you read the whole story of physiology you will see that every step has been based upon an experiment on living animals. I have just come from delivering a course of lectures in San Francisco on the history of physiology. I always knew that our science was based upon experiments, but I never knew it as I know it now when I have had to read carefully the old authorities and trace out all their work. Every one who has made an advance has made it by experiment on living animals. And in the old time, for instance in the seventeenth century, in the '60's or '70's of the seventeenth century, just following Harvey, there was a man, Richard

Lower, who did very great work on the circulation, on respiration and other parts of physiology, and so far as I can make out from reading his works he must in the quiet retreat of Oxford have performed just as many experiments, indeed, I believe on the whole he performed in the same time more experiments than Claude Bernard; and Harvey himself, in his great work on the heart, says not only once, not twice, but several times, that he came to the truth first of all by observing certain facts in the animals and then testing those facts by repeated experiments on living animals. And it is a duty of the whole medical profession to see that the physiologist is not hampered in his important inquiries by any misdirected legislation. (Applause.)

Now I have only just one word more that I should like to say, and it is about the relation of physiology to medicine, and I can speak not as a pure physiologist, but one who has known all the joys and all the sorrows of practice in the country. I have two things to say, and the first is that physiology must be cultivated as a science, as a pure science perfectly irrespective of the medical profession. It is an abstract science of the same value as chemistry or morphology or any other of the fundamental sciences. It is one of the fundamental sciences and it must be cultivated as such and it must be ranked as such, and it must hold its position in any university curriculum as an independent science. But, on the other hand, it has direct relation to medicine. In respect to this I desire to say, and I speak now, as you see, from very many years of

experience, that I think that it is not only a great hardship but a great mistake to think that every one who is going into the medical profession should be an accomplished physiologist, knowing all, may I call them, the "tips" of recent discoveries. All that is needed is that he should have a fundamental knowledge of the subject, a true, solid grasp of the fundamental principles. This may be taught him, and taught him properly, in a very limited time; and if he knows those principles then he can carry this physiology into his pathology, and he can carry both of them to the bedside. And in this relation physiology is a knife which cuts both ways, and I don't know which edge is the sharpest. If you have a firm grasp of the fundamental principles of physiology and of pathology you will be able to thoroughly understand any new view which may be brought before you. And here comes the double edge—You may recognize the new view as something which is based upon the true principles of physiology and pathology. Or, and this, I think, happens quite as often as the other, you may see that the new view is wholly antagonistic to the true fundamental principles of physiology and pathology; and seeing that will help you to clear your mind and prevent your being led away by enticing but erroneous and valueless theories. While I would urge as a physiologist that physiology should always be one of the important introductory studies to the medical profession, there ought to be the greatest care that only, if I may so say, the real juice of the grape of physiology is given to

the medical student and that his mind is not burdened by all the passing fancies of the day, which naturally occupy a great deal of the time of the professional physiologist, but for the most part vanish when they are brought into contact with practical life. (Great applause.)

The Prevention of Puerperal Septicemia*

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Puerperal septicemia is, for many reasons, a much better name for the disease to which it is applied than the old term—puerperal fever—but it is desirable to use this term, chiefly because it carries with it some suggestion as to the cause and pathology of the disease, and the inference of a practical application of the measures for its prevention and treatment that are conceded to be best in like conditions of other origin.

In no particular instance do I know of a more deplorable neglect of the accepted principles of modern surgical science and prophylaxis than is exemplified in our present obstetric methods. I allude to the actual every day working methods of the practitioner, for though we talk in an expansive way of obstetric antisepsis or asepsis, we fall far short of making our work conform to our theorem, though we must realize that such disregard of correct technique in the details of surgical practice would forever condemn and damn us as surgeons.

We must learn to appreciate that obstetric cases should always be managed with the same care and attention to aseptic detail that is required for the treatment of open wounds, that not

five obstetric cases in a hundred take place without the creation of such lesions or abrasions in the genital tract as may permit fatal septic poisoning, and that their situation and surroundings are such as to prove most favorable for the development and extension of such infection. That serious infection has not taken place often in the past would seem quite marvelous.

That our present daily obstetric practice is not better conducted is the more reprehensible because of the dangers having been pointed out so many years ago, and the effectiveness of an aseptic technique having been proved by reliable statistics many times during the last twenty years. In 1844—fifty-six years ago—Dr. Oliver Wendell Holmes' unanswerable essay on "The Contagiousness of Puerperal Fever" was given to the world, and every year of the past two decades has demonstrated the efficacy of preventive measures at the hands of Goodell, Price, Norris, Hirst, Williams and many other surgeons who had the knowledge, skill, ability and *training* to practically apply surgical methods to obstetrics. Must we not admit that the elimination of puerperal sepsis demands the adap-

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tation of a rigid surgical technique to obstetrics, and that the days of grace of the mid-wife, the unclean accoucheur, and the untidy, uneducated—often meddlesome—"experienced nurse" are drawing to a close?

The seemingly severe things I have just said have not been uttered hastily or unadvisedly, nor have I lost sight of the objection that will be sure to be raised in the minds of the experienced accoucheur when he recalls the filthy surroundings under which he is obliged to conduct many obstetric cases, and which he feels sure cannot be managed with any approach to practical asepsis. The argument that under existing conditions so few septic cases occur, may also be raised, but hardly deserves notice, for this is not the time for the consideration of that old question, which has been fairly discussed and dismissed in connection with every other preventive measure for the control of contagious and infectious diseases. In the light of our present knowledge of these things a fortunate immunity from accident in the midst of a filthy environment does not now excuse the accoucheur from the exercise of the most rigid aseptic technique attainable under the circumstances.

Research of comparatively recent date has conclusively settled certain important questions upon which present obstetric practice must be based, and the reduction of these experimental measures to the test of actual practice has only served to confirm their utility and value. The charming simplicity of the method is its chief advantage and it so completely provides for the

factor of environment that this may almost be left out of the reckoning. It carries us back to the contention of Holmes of over fifty years ago, in establishing the fact that infection of the parturient genital tract *comes from without*, and in the vast majority of instances is introduced or carried into the genital canal by the hands or instruments of the nurse or the doctor. He says: "And for my part, I had rather rescue one mother from being poisoned by her attendant, than claim to have saved forty out of fifty patients to whom I had carried the disease."

Kronig, J. Whitridge Williams and other investigators, have independently proved that the genital tract of the parturient woman is free from pathogenic organism, with the exception of gonococci; indeed, that it is resistant to the invasion of such organisms, the vagina bacillus of Doederlein exerting a powerful germicidal action in its natural habitat by maintaining the normal acid secretion of the vagina. This is true regardless of the gross appearances or physical characteristics of the vaginal secretion.

Reducing these conclusions to a practical application, we find that the correct way to conduct our obstetric cases is to refuse to allow the ante-partum or post-partum douche, excepting in the presence of a pre-existing infection, and to make clean and aseptic the hands and instruments of the nurse and doctor and the external genitals of the patient, through which these are introduced into the normally aseptic vagina. How beautifully simple. We have but to apply the well-known technique

of modern surgical asepsis, to refrain from making frequent, unnecessary and meddlesome vaginal examinations—abdominal palpitation being substituted—and close and keep clean and free from contamination such lacerations or abrasions as may result. This simply involves the preaching and practice of the gospel of cleanliness on the part of the patient, nurse and doctor, and in practice is not totally impossible under the most unfavorable conditions.

Dr. Geo. E. Shoemaker (Therap. Gaz., Dec. 15, '98) maintains that four simple things, if universally and carefully used to-day, will very nearly banish puerperal sepsis: 1. The hand scrubbing brush. 2. The mercuric chloride (or equivalent) solution for the hands and genitals. 3. The baked napkin. 4. The clean suit. How few have attained this simple standard of asepsis in obstetric practice.

In order to have a better understanding on the part of the patient and nurse, and with the hope of securing effective co-operation on their part in carrying out the details of preparatory treatment, I give them a printed slip upon which certain directions are set forth. Certain articles are also ordered to be procured, and they are such as I regard as necessary in every case if it is to be conducted in a satisfactory and cleanly manner. Such things as lubricants, nail brushes, soap, dressings, etc., should not, in my judgment, be carried about by the accoucheur from house to house and patient to patient, but should be provided new and clean for each case, particularly as they are in-

expensive and easily procured. Until this plan has been more uniformly adopted, however the obstetric bag of every accoucheur must contain some of these things, for one will be called to cases where they have not been provided, and must have his own to fall back upon, and it will be better to have these for such emergency than to have none at all.

My slip is appended:

Information and Direction for the Patient and Nurse in Preparing for Parturition.

Name of patient.....
 Residence.....
 Last menstruation
 Delivery expected
 Name of nurse
 Residence
 Telephone

The patient should send for the nurse immediately when it has become evident that the labor is about to begin.

The nurse will be expected to see that these directions are followed in detail whenever time will permit. In case the pains are very frequent, the progress of the labor rapid, and delivery imminent, the general bath and the enema may be omitted, but they must be given if there is time.

Neither the nurse or patient should introduce a douche point, catheter, or other instrument, into the vagina or urethra for any purpose whatever, nor should the fingers or hand be used to make examinations; which means, in brief, that it is only upon the express orders of the doctor that they are to

use the (1) vaginal douche, (2) the urethral catheter or (3) the exploring finger.

The nurse must confine her cleansing and antisepsis to *the external parts alone*, except when other directions have been specifically given, but will be depended upon to *cleanse those parts as thoroughly and carefully as for a surgical operation*, afterward protecting the vulva by an absorbent, occlusive dressing for the cleanliness of which she can vouch.

ROUTINE.

1. When labor is about to begin, or as soon after as possible, one or more enemas of soap and water are to be given till the rectum is quite empty; then,

2. The patient is to have a warm soap bath—in a bath tub if one be available—particular attention being given to the cleaning of the external genitals and anus, and the creases and folds of the skin about the groins, abdomen, buttocks and thighs.

3. The external genitals are then to be washed with a solution of bichloride of mercury, 1 to 1,000; or of lysol, 1 to 100; to be followed by clean, warm, boiled water.

4. A clean, dry absorbent occlusion pad is now to be applied to the vulva, and when possible this should have been sterilized.

5. Clean washable clothing may be put on the patient and a clean, properly protected bed is to be made ready for her.

6. After the patient has been prepared she must not use the water closet when the bowels or bladder are evacu-

ated, but should use a clean chamber vessel, or jar, or a bed pan.

7. After each evacuation the external genitals must be cleansed as before (No. 3) and a fresh occlusion pad must be put on. (Vulva pads are best made of cotton and gauze and should be made and handled with clean hands only and placed in clean receptacles. They may be burned when soiled.)

.....M. D.

Please have ready for use at the time of delivery:

1. Pure chloroform (for anæsthesia) 4 oz.
2. Alcohol (95 per cent.) 8 oz.
3. Boracic acid (for cord, etc.) . ½ oz.
4. Lysol (antiseptic and lubricant for hands and vulva) 8 oz.
5. Johnson's Antiseptic Soap (P. D. & Co.) 4 oz.
6. One new scrub brush for hands, etc. (fibre preferred)
7. One pound of absorbent cotton
8. One carton plain sterilized gauze (25 yards)

There are certain things that have been long and intimately associated with obstetric practice that are quite incompatible with an aseptic obstetric technique, and these must be so regulated, modified or totally abandoned as to make the practice of obstetrics conform to modern requirements. Enumerating some of these and only the more important, I would exclude the unwashed hands of attendants, the unwashed genitals of the patient, the

filthy saucer of lard and the ubiquitous pot of vaseline, the towel or rag for wiping the hands after examinations (which is thrown anywhere in the interval), the loaded rectum and bladder during the delivery of the child, the needless frequency of vaginal examinations, unconsidered vaginal douching, the dirty pad for the vulva—on the theory that any old rag is good enough to absorb the discharge—and the uncovered clothing of the accoucheur, for if he wears an apron it is for his own protection and not the protection of the patient.

"Doederlein (*American Year Book of Medicine and Surgery*, 1900, page 270) has for some time caused rubber gloves to be used by all who make vaginal examinations during labor. The results have been most satisfactory; lower puerperal temperature, shorter recovery, and less and cleaner lochia. The advantages of the use of gloves are: 1. They are impermeable. 2. They are easily sterilized in steam, boiling water or antiseptic solutions. 3. When wet in 1 per cent. lysol solution they are smoother than the hand. The gloves are boiled for half an hour, and then placed in 1 per cent. lysol. The hands are first sterilized as carefully as possible, the gloves are filled with 1 per cent. lysol, and a glove is put on the hand used in examinations." This use of gloves seems to be a very desirable technical detail under certain circumstances, particularly when frequent vaginal examinations are necessary or when students are allowed to make them.

Among the more important reforms

necessary is the elimination of the mid-wife evil, as it at present exists, and the establishment of a legal requirement that will at least carry with it the assurance that the mid-wife is competent to conduct her obstetric cases after an approved aseptic method, and it might not be amiss to make some such law regulating the "experienced" obstetric nurse as well.

The prevention of puerperal septicemia in every obstetric case exacts certain things of the accoucheur, just as the requirements of perfect asepsis in surgery do of the surgeon, excepting that in certain respects the requirements must if possible be more rigid for obstetrics. The accoucheur should not have attended or come in contact with certain contagious or infectious diseases, as measles, scarlet fever, diphtheria, etc., for some days immediately preceding the attendance of a woman in labor, nor should he have dressed septic wounds, made autopsies or in other ways soiled his hands with infecting things. These exactions, taken together with the time consumed in holding himself in readiness for call at any time of day or night, so interfere with the regular course of business of the physician, and so encroach upon his time for rest and recreation, that the small fees usually charged for obstetric work are totally inadequate compensation, and are doubtless regarded as a justification for some of the careless methods in vogue. An obstetric case carried through all its stages, is worth much more than is ordinarily paid for the service if proper precautions are taken to prevent sepsis and other com-

plications, and the people must be educated up to the point where they will appreciate the necessity for proper care at such times and be willing to pay a fair fee for the time, trouble and privations of the attendant.

Next in importance to the exclusion of disease germs from the parturient genital tract is the prevention of favorable conditions for their development and multiplication. This brings us to the border between prevention and treatment; prevention of abrasions and lacerations, and a consequent excretion of serum as a culture medium; and treatment of such breaks in the continuity of the tissues as may have unavoidably taken place.

The prevention of lacerations of the soft parts involves altogether too much of this great subject to be taken up here, and the importance of their treatment is fully understood by all up-to-date physicians, and I believe correct methods are commonly practiced. There is but one point I would emphasize, and that is the relative importance of the vaginal tear—so common, and often undetected—over the so-called torn perineum, involving the skin. The former is not only a more favorable situation for the absorption of septic substances, but if left without suture is a far more potent cause of subsequent pelvic disorders. These lacerations, above all others, should always be examined for in a good light and when found they should be accurately closed with due regard to the approximation of the underlying muscles and fascia.

This paper is devoted to prevention to the exclusion of treatment chiefly

because I feel that correct treatment is already better understood and applied. There is little new in what I have said about obstetric asepsis and the prevention of puerperal septicemia, but I feel that no proper appreciation of the importance of the subject has ever been manifested by the large body of medical men, and that a routine application of the commonest and simplest aseptic technique is the exception rather than the rule.

The very low mortality and almost the extinction of puerperal sepsis from the modern maternity hospital is an illustration of what may be done under ideal conditions, and I feel assured like results may be obtained in the homes of the people when we have educated our patients, our nurses and ourselves to know and believe that the practical application of antisepsis and asepsis is as necessary to successful obstetric practice as we know and believe it to be in surgery.

Nature, who has made no two leaves to resemble each other, has endowed our souls with a still greater diversity, and imitation then is a kind of death, since it robs each of its individual existence.—*Madame de Stael*.

Not he who distrusts the methods of reason, but he who follows every line of investigation, finds at last all lines melt into transcendent beauty, all fade into the hallowed mystery that is pervaded by the peace of God.—*Jenkin L. Jones*.

When Is Contract Practice Unethical?*

WILL B. DAVIS, M. D., PUEBLO, COLO.

[While this paper was intended to deal with the affairs of the Pueblo County Medical Society, and the rights and duties of its members only, the author does not apprehend that it will require any great degree of mental flexibility to apply it in part, if not in whole, to medical societies in many other localities.

In the course of a somewhat heated discussion in the society—on a subject it matters not what—the writer took occasion to say that Pueblo was an especially difficult field for young physicians just entering the profession, because they soon found, by locating here, that they had subjected their professional existence to the squeezing effects of two equally unbridled elements of competition—the “contract” doctor the one, and the advertising quack the other—and of the two, in his opinion, it was a “toss-up” as to which was the most unfair in their nature, or far-reaching in vicious effects upon the legitimate profession at large. This, as might have been expected (had the speaker stopped to think, and remembered that a majority of the members held contract jobs), elicited very warm protests from some of the “contract” men present. Hence this humble effort, upon which alone the author is more than willing to submit to the fair-minded reader, as to whether he has succeeded in making out “a case” against the “contract” members of the Pueblo County Medical Society.

In concluding this somewhat explanatory preface, the writer would suggest that the questions arising out of “contract practice” are matters for

local societies first to deal with. Until they do take up the fight in earnest, and prosecute it to its full ends, how can the American Medical Association take cognizance of them?—*W. B. D.*]

Several times during the preceding year the question of contract practice came up in this society. I was opposed to raising the question in any form, as I expressed myself at the time, giving as my reasons that any discussion of this threadbare subject could, or would, not result in any good. That nothing which had not already been said by other societies could be added by ours—that any discussion would end where it began, and that the result would not be a declaration that contract work was ethical, but that whatever breach of ethics was attached to, or implied by, its pursuit, would be ignored.

This, I believe, is about the disposition—whatever disposition has been made—of the subject by leading medical societies elsewhere.

In my contentions against airing this question in this society, I did not suppose that any of its members would develop the hardihood to not only try to maintain that contract work was not a violation of medical ethics; but that if it was, every member of the society was guilty of contract work in one way or another; and that any member who did not have contract work would be

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glad to accept it—would take it if he could get it—or at least words to that effect.

If such is the case, Mr. President and gentlemen of the Pueblo County Medical Society, I wish to withdraw my objections to a discussion of the subject, and to substitute, instead, the remark, that I think it is high time we are taking an account of ourselves; or, in other words, and to use a slang expression, "seeing where we are at."

To treat of the subject in its comprehensive sense, or to undertake a review of its history, would be a laborious task, not only to the writer in preparing it, but also to you, in listening to a lot of posthumous schismaticisms. I will therefore leave out all study of ethics except in its practical application, all abstruse considerations under the head of contracts, any and all actions taken by any other medical society under the sun, and present the subject in its essence, and apply it to ourselves as we have existed as a society, and as we stand to-day.

First, then, what are ethics—practical ethics? I might say that practical ethics, and laws, in a general sense, mean about the same. For instance, in one of the selected definitions of law, given by the Century Dictionary, I find the following, copied from Sedgwick's Method of Ethics: "We must define laws to be rules of conduct which we are morally bound to obey, or, more briefly, commands imposed by rightful authority." The same dictionary gives this definition of ethics: "A particular system of principles, and rules, concerning moral obligations and regard

for the rights of others; rules of practice in respect to a single class of human actions and duties; as, social ethics; medical ethics." From same authority: "The science of right conduct and character; the science which treats of the nature and grounds of moral obligations, and the rules which ought to determine conduct in accordance with this obligation; the doctrine of man's duty in respect to himself and the rights of others." Dungleson's Medical Dictionary defines medical ethics to be "the duties and rights of medical practitioners." All definitions of ethics hinge on "rights" and "duties." Webster gives under the head of law, in human government: "Any edict, decree, order, ordinance, statute, resolution, judicial decision, usage, etc., made or recognized, and enforced by the controlling authority."

In all courts of law, in the absence of statutory provisions governing any particular question, common law rules are invoked. Indeed, it is the purpose of statutory provisions to interpret and apply common law principles to conditions in the particular community for whose benefit the controlling authority legislates.

The Code of Ethics of the American Medical Association is a part of its laws—its interpretation of the proper application of general ethics to the needs and wants of the medical profession. This celebrated code of ethics is a part of the organic law of every medical society organized under and in affiliation with the American Medical Association. It is the general governing

law for regular practitioners everywhere in this country.

But all regularly organized medical societies possess legislative authority to enact laws, rules and regulations adapted to their own particular needs, not to conflict, however, with any of the laws, rules and regulations of the American Medical Association. Such laws, rules and regulations as local societies do enact for their own government, then, are laws unto the members of such society, and constitute in an especial sense a part of their code of ethics. The very fact that a local society specifically adopts certain laws, rules and regulations, is *prima facie* evidence of their recognition of the need of such for the government and conduct of its members. It is in fact and substance a practical admission on their part that general ethics, or the code of ethics of the American Medical Association are not specifically sufficient for the proper regulation of certain matters in their individual community, and they therefore adopt and subscribe to certain measures especially, that no room for doubt or mistakes may be made as to what they construe to be the ethical duties and rights of its members touching such matters.

I hold that such laws, rules and regulations as such local society so adopts and subscribes to, do constitute and are an important part of the ethics of the members of such society. It is in fact the legislating an especial code for themselves, with reference to particular things in their own community, and specifically prescribing how its members shall deal with them.

Second, what is contract practice? This would be as tedious to discuss, in its unabridged sense, as the subject of ethics might prove. It can justly be claimed that all work was by implied, if not expressed, contract. Admitted. But what is the nature of such when applied to the practice of medicine and surgery? Simply this: the patient, by his act in employing the physician, legally binds himself to pay such physician reasonable compensation for his services. What is reasonable compensation? The rulings of most courts on this point have been in substance this: to determine what reasonable compensation would be, the nature of the services must be considered in connection with the prevailing custom of charges for such particular services, in the community where such services were rendered.

But contract practice, as we understand it, and as applied to medicine and surgery, has nothing to do with statutory or common law practices governing the question of fees for professional services. Indeed, the very nature of the compact sets aside this feature. The doctor, on his part, agrees to serve so many heads of people in a professional capacity, for such or such consideration. His legal recourse extends only to the enforcement of his contract. The "heads of people" in such contract usually refers to employees of corporations, or members of secret and so-called mutual benefit societies.

This, in the abstract, is not a violation of anybody's rights or duties according to this society's ethics, provided such member of this society entering

into such, contracts for reasonable compensation for his services, determinable by considering the nature of the service in connection with the established fees of this society, prescribed and adopted by this society, and subscribed to by every member of this society for the government and guidance of its members, touching the question of compensation for professional services.

But does contract practice, in the sense we use the term, and as followed by some of the members of the Pueblo County Medical Society, imply, or even contemplate, anything of the kind? Has not every member of this society who has accepted, and done, contract work, by his acceptance, waived even all common law recourse as to obtaining reasonable compensation as we understand it? And more: has he not, by his daily and nightly professional pursuits, trampled under foot the very schedule of charges which he himself helped frame, formulate and prescribe?

The Century Dictionary defines the word contract thus: "To make a bargain; to enter into an agreement; to covenant; as a contract for a load of flour; a contract to carry the mail." Contract also means to draw up; to make smaller; to reduce in size, etc.

In focalizing this analysis upon the Pueblo County Medical Society I find among other things which it has officially prescribed and enacted for the guidance and government of its members, a fee bill. It is at least a part of what this society, in its legislative capacity, has declared to be the duties and rights of its members, and its observance is necessarily therefore a part

of what it officially announces shall be the ethics of its members. You and I, Mr. President, or another, may differ on some points as to ethics in general, but I hold that there can be no difference between any of us as to the entire correctness of this statement.

I therefore maintain that any member or members of this society who have violated the provisions of the fee bill adopted by the society, whether under the guise of contract work or not, have been guilty of unethical conduct.

Members may resort to hair-splitting subterfuges to their own full pleasure, pose as models of ethical conduct, label themselves as the very pinks of professional perfection, or offer themselves as living saints of ethical consistency, if you please; yet, Mr. President, if they have been doing contract practice in Pueblo, they are guilty of a gross violation of ethics.

More than this: they have plainly laid themselves liable to suspicions of duplicity, or to put it in the mildest manner possible, to both professional inconsistency and ethical insincerity, in that they took part in the enactment of, and subscribed to, laws for the government of the members of this society, well knowing at the time they were doing it, that they did not expect, or intend to observe them.

If any want to deny this, then I ask, in the name of conscience, what does this fee bill mean? And what did they mean when they took part in its adoption at the very time they were under agreement, and are still obligated, to corporations or secret societies in tenor that committed them, and to which they

have remained committed, to violate it in its every part?

And they violate it grossly, for I am reliably informed that the average compensation received for such work in Pueblo would amount to very little, if any, more than one-fourth of what they themselves helped enact as a minimum schedule of charges as a part of the rights and duties of the members of this society, under these words: "We, the members of the Pueblo County Medical Society, believing it for the best interests of the public, and ourselves, that uniform minimum fees for professional services should be established, have adopted the following schedule of prices, and in all ordinary cases will be governed by them. For cases requiring unusual skill or the expenditure of time, the fees shall be in proportion thereto."

Mr. President, I hold that there is no provision, by any act of this society, which exempts contract practice from the operations of this fee bill. I also hold that there does not exist, among any of its official laws, by-laws, rules and regulations, the most remote allusion to contract work in any manner whatsoever, to say nothing of acts of exemption.

Is there anything in contract practice that entitles it to self-exemption from the operation of the provisions of this fee bill in the case of any of the members of this society? If there is, why has it not been so declared?

Again, is any one, or a set of members, to be privileged above others as to their ethical—or unethical—conduct in this society? If so, why not define

the particular duties and rights of each separately, and by name, that we may know who are, and who are not subject to the operation of this or that of our own regulations?

The questions of corporation wants and necessities are matters for their own consideration and treatment, and it is not sufficient for any one to claim, in this society, any such excuses for violating our own rules. Corporations are generally able to take care of themselves, which they usually do, whether at the expense of all principles of ethics, or the setting at naught all municipal, state and national laws.

But if this society is going to continue to permit its rules to be so ruthlessly violated, why not put itself on record in manner to correspond? Why not concede, by legislative enactment, the overtowering interests and influences of corporations as compared to medical ethics and the rights of the individual citizen? Will you do it? Can you do it and maintain anything like ethical equity? Can you take such action and not violate the very spirit of the code of ethics of the American Medical Association which some of our contract brethren would have us believe they dote so much upon?

Mr. President, I protest that after, as a profession, we have so long suffered the blighting effects of contract practice in our midst; after we have been so unrelentlessly and continuously shorn by the contract doctor, it is beyond human patience and forbearance to further sit in lamb-like meekness, and hear them claim, upon the floor of this society, that they are not guilty of

a violation of ethics, or, if they are, that all are equally guilty with themselves. If this is not akin to adding insult to injury, then the saying is a misnomer. It is calculated to engender a strong sentiment on the part of those suffering the injury, for sweeping and thorough reforms. It begets a feeling of appeal, in the name of justice and equity.

And when members will do, and wink at, such practices, and also resort to clandestine advertising by such means as half-column article reports of an operation upon some insane subject (and suppress the sequel), or, under the guise of a personal correspondence from abroad, members of this society are glaringly advertised as to some special lines of work—which not only contemplates an abuse of ethics, but the duping of the friendly disposed newspaper man to the extent of beating him out of just compensation for such advertisements that are cunningly parenthesized, as it were, among some matters of general interest to the public—and at the same time are found raising their hands (and voices) in holy horror at the thought of permitting members of this society to publish (and pay for) simple directory cards in the local papers, a thing which the judicial council of the American Medical Association has repeatedly declared was not a violation of the code of ethics of the Association, I can but exclaim that anything suggestive of a professional millenium for the membership of this society strikes me as being too far distant in the dim future for this deponent

to venture even a speculative guess upon its coming.

More than this, as to the fee bill—it has been so thoroughly emasculated, as it were, by the contract members of this society, as to render it practically inert as a guide or evidence in court, if needed, and as was one of the purposes of its adoption. Suppose, for instance, in a given suit to recover compensation for professional services, this fee bill was introduced in court. Then suppose the attorney for the defense made the point that the bulk of surgical work, and the only legally confirmed practice of any nature by actual agreement was to be found among the contract practices of the city. Can you not see what effect it would have? Its uses in this respect has not only been destroyed for the contract doctor, but for those who do no contract work.

Now, in such a contingency, suppose the attorney for the defense would have summoned some of the contract members of this society, and questioned them somewhat after this manner:—You say, doctor, that the Pueblo County Medical Society is the representative body of medical practitioners in this community, and that you are a member of said society, but at the same time you admit that you are under contract with the X. Y. Z. company to do the practice of its employees at the rate of 50 cents a visit, and 25 cents for office prescriptions; then why is it, in the case of the defendant, because he happens to be so unfortunate as to incur the expense of medical attendance, your organization, and its so-called schedule of charges, would require such member

of your society as he might employ to charge him four times as much as you are actually under contract to render the same character of services to the employes of the X. Y. Z. company for?" How would our highly ethical (?) contract brethren answer such a question, may I ask? Or, and in other words, why should one John Smith, because he works for the X. Y. Z. company, be charged only one-fourth of what you require from John Doe, an employe of A. B. & Co., or, for that matter, who has no employment at all? Or, why would you charge, for the same character of services, Slim Slack, whose wages amount to only \$45 per month, the sum of \$2 per visit, when, at the same time, you are under contract to do the practice of Rotund Corpus, whose salary is \$150 per month, at the rate of 50 cents a visit? How do you suppose that would sit upon the mental stomachs of the average juror? What could you do, if a jurymen yourself, with such evidence to guide you as to what reasonable compensation for professional services were? Would you take the ipse dixit of the Pueblo County Medical Society, or would you take an entity—a contract—a tangible something to guide you, instead of this jack-o'-lantern intangibility, designated a fee bill, whose ethical purposes have been ignored by you ever since its promulgation by the Pueblo County Medical Society, of which you claim to be a member?

Why, sirs, such attempted duplicity as would be implied by the introduction of this fee bill into a court of justice, after such complete and thorough nulli-

fication at the hands of its framers and pseudo-guardians, would appear so much like unto an effort at trickery and deception as to cause the spirits of the most unscrupulous mediæval diplomats to hold high carnival for joy, to riot in bacchanalian ecstasy, and to point in weird felicity at a picture so remindful of their own lives of fraud, dissimulation and hypocrisy.

Think of it. A body of men, purporting to be worthy members of an honored profession, standing, as it were, self-convicted in a court of justice of such questionable work! It will be claimed, perhaps, that this is drawing the picture too strong. I do not think so.

If the fluoroscopic rays are needed in the detection of foreign bodies in the flesh or of tumors and injuries of the bony structures of the physical man, why not X-ray the moral occasionally, that, if any unhealthy invasion of our body politic has been made, or if the skeleton of our laws and ethics has sustained any deep seated fractures or dislocations, they may be detected and mended.

To conclude, Mr. President, whether contract work is unethical in a general sense or not, I maintain that it is a violation of ethics in a special sense, for any member of the Pueblo County Medical Society to engage in it under our present laws, rules and regulations.

Mrs. Marian Covele, of Medder's Run, Ky., gave birth to four healthy children, two boys and two girls, October 2.

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EDITORIAL

WHEN IS CONTRACT PRACTICE UNETHICAL?

This question is not one easily answered in all its bearings, and we have thought it better to have the opinions of a number of physicians favoring both sides of the question in the form of unsigned short editorials.

There are certain conditions which make contract practice a necessity. Necessity is the mother of law and ethics as well as of invention. That which is necessary must, from that very fact, be right. For example, railroad cor-

porations are in duty bound to make adequate provision for injuries to its employes and passengers, for which it is accountable. Accidents cannot be entirely avoided, no matter how great the precautions taken, and accidents to its employes and passengers are therefore inevitable. For the prompt and efficient care of these the corporations are certainly responsible, and they must, in justice to the injured, provide an *organized* surgical system. It will not do to depend on the chance attendance of a practitioner whose chief evi-

dence of availability may be his proximity. For this organized system, with its inherent benefit to the injured, a contract service is essential. Mining and other companies may be called upon by the necessities of circumstances to make provision for this same class of cases. It is evident, then, that contract practice not transgressing these bounds is not only permissible, but a necessity—proper, and therefore ethical. On the other hand, it is very questionable whether, under ordinary circumstances, it is proper to include in such service contracted for the treatment of injuries incurred in other ways, or of affections classed under the head of general medicine.

Again, location may be an important factor in determining whether or not a certain form of contract service is proper, and therefore ethical. In a mining camp, for instance, with, say one hundred men employed, a competent physician might be induced to locate if guaranteed a certain minimum income, regularly paid, when, if he had to depend upon being employed by the chance individual cases at irregular intervals, at the ordinary rates of remuneration, and that of very uncertain collection, such inducement would be lacking, and the camp left without the security of a resident medical attendant. Under such circumstances the ethics of a contract can hardly be called in question.

All medical practice, at the present day, is based on contract, expressed or implied. When a patient visits a physician's office and nothing is said about

the fee the physician expects to receive and the patient, it is to be hoped, expects to pay some fairly well understood remuneration. This is an implied contract. If the amount is fixed in advance it is an agreed contract. To neither is exception generally taken on moral grounds. If it is right to make a contract at all, the question of amount must be left to the individual unless we are to be governed by the principles of trades-unionism. Whether a certain physician shall charge 25 cents or \$2.50, as a rule, for an ordinary office call, is not a question of ethics, but of personal policy. The services rendered are generally (not invariably) of corresponding value and correspondingly esteemed.

To care for a considerable number of individuals at a certain sum per person per month or year is a different proposition from caring for them at a certain sum per call. For a given individual, in case of sickness, it may be very cheap, but in the sum-total it is not necessarily so. It is similar to insurance. Such contracts are always based on the fact that of a given considerable number of persons only a very small per centage need attention at any one time, or perhaps during the entire period of the contract, and that the sum paid by those who do not need the care are sufficient to make the practice remunerative; possibly, but not usually, even more so than the treatment of the same actual number of cases at the ordinary fees. It should also be remembered that in corporation practice of this kind, a very large propor-

tion of the employes would, if there were no such contract provisions, go to the physician or surgeon of their own choice and then—never pay. The consequence is that such practice is really not as cheap practice as it would actually be without the safeguard of the contract with the financially responsible corporation.

The ethics of those cases in which the employes have no voice in the selection of the practitioner may, of course, be seriously questioned.

There are many things which can be urged against contract practice. One is that it closes the field of honorable competition. The man who holds the contract has a "sure thing" (except for the few having the right to his service who nevertheless chose another) to the exclusion of all others, regardless as to whether they be his superiors or inferiors in ability and knowledge. They are deprived of the natural opportunities for advancement through no fault of theirs or no merit of his. In that manner obstacles, and sometimes very effective ones, are unjustly placed in their way. This is a matter of greater importance to the young practitioner. He who is established does not usually feel its effects to any great extent, as the people will already have "sized him up," and decided whether or not they would care to have him for their attendant, and would be governed accordingly, regardless of their opportunities elsewhere. If they have learned to want him sufficiently they will call him in and pay him, even though they could

have someone else for little or nothing.

Contract practice is an injury to true professional success in the case of those who follow it, and is the main cause of only mediocre attainments in the case of some who would have gained professional eminence in private practice. Take the young man just entering the profession, for instance—and this is really where the trouble generally begins—he lacks the incentive to professional "labor" that comes from healthy competition just in proportion to the amount of contract practice he secures, and his ambition to excel in professional accomplishments is dulled *pari passu* with the amount of contract support he gets, for the necessity for such attainments to success does not obtain with contract practice as with a practice dependent upon the public at large. This is the essential reason why, out of the great army of contract doctors in the United States, so few are known except among the "birds of a feather" cases, their fees will not necessarily be injured by it. Not so, however, with the general practitioner.

Aside from the unfairness of the system on its face, and aside from employes of corporations and members of secret societies who have their society doctors, the general public may claim—and with apparent justice—that the average fees for professional services rendered them should be no greater than many physicians are actually under contract to serve others for.

The self-established (?) fees of medical societies, or of individual practitioners, would stand as nothing but a

chimerical illusion in a court of justice when confronted with such evidence as an overwhelming number of actual contracts for the rendering of the same character of services at greatly reduced rates now to be found galore in every town and city throughout the length and breadth of the land.

Our friend from Pueblo who is so careful about the ethics of contract practice gives as the substance of all definitions of ethics, "Rights and Duties." Corporations, insurance companies, mining companies, etc., have some rights that can not in many cases be realized except they have a competent medical man to represent them, and to look after their interests, and that can be done best and most satisfactory to all concerned by having a previous contract with some reputable physician. Therefore it should not be considered unethical for a physician to take such a contract. Again, a city cannot have proper sanitation unless it has some competent medical man to look after its sanitary conditions, and it should not be considered unethical for a doctor to enter into contract for such purpose. The matter of the fee is from the very nature of circumstances so varied that the existence of a fee-bill should not be construed so as to make it unethical for a physician to receive anything he can get for his services, however much it may fall below the minimum fee.

Neither should the existence of a fee-bill hinder a physician from entering into an agreement when it is to the best interests of justice.

Certainly local societies have the

right to make laws to govern themselves provided such laws do not conflict with the laws of the supreme society—The American Medical Association. I have just finished reading the code of Medical Ethics of the American Medical Association, and there is certainly nothing in it that can be construed to indicate that certain forms of contract practice are unethical. Therefore, in answer to the question, "When is Contract Practice Unethical?" I would say that contract practice is unethical only when a majority of the regular profession in a given community decide that it would be to the best interests of the profession and the community at large that no doctor do contract practice.

The exact definition of the term "contract doctor is difficult to determine when we consider that any specific agreement is a contract, and that such a compact, whether expressed verbally or in writing, is legally valid. By logical deduction we are forced to concede that the practicing physician, whether limiting his practice to laymen per se, upon the latter's solicitation, or signing an agreement to treat employes of a corporation or members of lodges or fraternities, virtually complies to the terms of contract; with the layman it is an implied contract, subject to the dictation of professional honor and individual conscience, with the corporation it is a signed contract which commercialism unceremoniously requires.

It would be hardly just to state that a physician employed under contract to attend the employes of a company is

guilty of unethical conduct, for the business world defines ethics as legal honesty, and so long as a physician performs his duty to the men he is employed to treat, he cannot be judged guilty of misconduct.

The aim of corporations is to amass money with the least expense. Thus a contract doctor often works for a smaller guaranteed sum per capita than he would realize from the same number of men in every day life, yet he does not in any way, by his conduct, lower the intrinsic valuation of a physician's services to society at large, and the fees of a private practice are unaffected by the business agreement. The world makes no provision for the well-fare of the doctor; his existence is speculative, and, taking the profession collectively, it is truly a question of survival of the fittest (not always mentally).

Where the contract doctor agrees to treat any number of people for a markedly reduced fee, he reflects discredit to himself without detracting from the value of his professional confrere; the smaller the retaining fee the poorer the service rendered. In some few instances this may not be true, as the stern hand of necessity has compelled the struggling doctor to accept "any port in the storm." The average underpaid contract doctor stands in the same relationship to his company as the Indian missionary whose weekly pay was less than one dollar. Upon complaints from his parishoners of laxity in prosecuting his religious duties, he was summoned before his board to explain his conduct, which he briefly summed up

in the following: "Small pay, small preach; big pay, big preach." We leave the reader to draw the inference.

Can physicians as a class of "expert workmen" demand just recognition for their services, by opposing, individually, the desire of the public to depreciate professional worth? Every mechanical trade from the humblest to the highest order of workmanship, preserves its integrity by the aid of a union; if classes of laborers hold this privilege, why should not physicians whose education represents a cost of time, money and danger to health, bind themselves together and thus compel proper recognition for all public and private work.

The so-called fee bill is purely nominal, having no weight with the patient or unscrupulous doctor, who often draws the attention of his client to the bill, not to uphold his fee, but on the contrary to show how reasonable his charge is, compared to other doctors; a species of foul advertising at the expense of his more ethical and certainly more honest professional brother.

The trade apprentice on becoming a journeyman is recognized as such by his union, and thus from the start of his mechanical career, he is assured of the support enjoyed by every member of his trade, regardless of age. On the footing of equal rights and protection, the young man has the benefit of exhibiting his cleverness, unhampered by a struggle for a precarious living; whatever work he performs is paid for by a just wage. How does this compare with the graduate in medicine or law, who usually finds more sympathetic enemies than friends in the profession?

If we are endeavoring to obtain interstate licentiate laws, let every medical society join in a unanimous body for the protection and regulation of fees, and to the trite saying, "Labor and Capital," let us add, Intellect, Labor and Capital. By joint action of the profession it would be but a question of hours before the contract doctor would demand a reward for his labor which would be an adequate compensation for the service rendered, and in so doing, uphold the scale of fees beyond the criticism of the most ethical.

Were we to answer this question, upon which Dr. Will B. Davis wrote a paper for the Pueblo County Medical Society, we would simply state always! and we would be willing to base the major part of our opinion upon what the doctor stated in his paper. We know just what he means in his peroration. There is a ring to it that makes us feel as though a true physician were airing his thoughts. Unfortunately, however, the paper has a tinge of business about it, which we feel the doctor did not mean. It has a "You are keeping us poor by your low charges" sort of meaning to it, that should not mark such an effort.

That this subject has never been settled by the societies is the result of its emanation from that which is contrary to the principles that should underly the thoughts, the feelings, the actions of a true physician—a question of pay. As with the minister of the gospel, so it is with the doctor. As long as there is anything but glory attached to his calling, there will be those

who seek for all they can get out of their work, and those who will shrug their shoulders at the thought of the large income some of them receive.

The "fee bill" adopted by many of the societies was such a strictly business-like procedure, and was itself so strikingly against the fundamental principles that should guide a physician in his work that we should not marvel at any such business-like action as "contract practice." We admit that owing to the overcrowded condition of the medical profession, the "fee bill" was a question of vital importance, and became a necessity. Just so long as a diploma in medicine is so easily procured as it is to-day, just so long as many of the different states are so lax in their requirements, just so long will there be competition. In almost any known profession, it is a question of ability to gain the foremost ranks. Not so, however, in the medical. Our weakest members sometimes have the largest practice. It is their business ability that carries them there. And so it is that we may hurl at the contract physicians all the invectives at our command, but we will never stop them. We may even turn them from our societies (a most unjust procedure), and when they pass away, other members of our society will take their places. Is this right, or is it wrong? Dr. Davis says it is wrong. Dr. Davis certainly has a right to his opinion. Many of us will agree with him, and many will not. After all, do you not think, Doctor, that any discussion upon this subject will be fruitless of good results? Is it not one of those necessary evils that

must be endured? We think the subject should be forever shelved, as it is liable to engender more or less ill-feel-

ing among those who believe contract practice is all right as long as they are the contract physician.

College Notes---The Denver College of Medicine

BY ALLISON DRAKE, PH. D.

The first scholastic year of the new century bids fair to be a significant one for the Denver College of Medicine. The registration for the year is already greater than for any previous year, many students entering to advanced standing from other institutions, and particularly from institutions whose clinical advantages are not equal to those of the Denver College of Medicine. The senior class has been especially fortunate in the accession of students from other colleges and now contains twenty-two members. Two faces, however, that we hoped to see are, we greatly regret, wanting to the senior group. During the first week of the present college year Mr. Henry Trumbull Wattles succumbed to an attack of pneumonia. Mr. Wattles was a student of rare ability and application, and as an associate was much esteemed by his fellow students. The other missing countenance is that of Mr. Clyde Vernie Greenlee, who, through the advice of his physician, Professor William H. Bergtold, is taking a year's rest with friends in Idaho. We miss him much, and particularly his sprightly, iridescent temperament, which we have had the good fortune personally to enjoy in its most interesting phases.

Our dean, Dr. Edmund C. Rivers,

professor of ophthalmology, was not with us at the opening of the session, having taken a short vacation to shoot deer, elk and moose in the forests of Canada. In the last issue of the *Canadian Sportsman* it was observed, not that there had been any such marked decrease in the number of deer, elk and moose as was to have been expected, but that those already keen-eyed denizens of the wood had unaccountably received sudden and vexatious increase of visual power.

During the first week of the current college session Sir Michael Foster, whose name is synonymous with the rise and progress of physiological science, was the guest of our own widely and justly celebrated physiologist, Professor Henry Sewall, and very kindly consented to address the students of the Denver College of Medicine. The most striking feature of Sir Michael's appearance is modesty, which, as has often been observed, always accompanies true greatness. As he spoke, one could not but recall the modest demeanor and attitude of the great Athenian law-giver as described by Aeschines in the oration against Timarchus.

Sir Michael spoke of the beginnings of physiological study and investigation

in England and was heard with profound interest by all who could get within hearing distance. What was of especial interest to the students of the Denver College of Medicine, many of whom earn their bread *de facto* by the sweat of their brow, was the account of the early student life of Dr. Henry Newell Martin, who also has won enviable fame in physiological research. Dr. Martin, like many of the world's great thinkers and investigators, felt fully in early life the meaning of Johnson's well-known line:

"Slow rises worth by poverty depressed."

When a student Dr. Martin had to work for his board and was consequently unable to attend more than one of the two hours daily devoted to lectures and laboratory work in the course given by Professor Foster; but, though thus handicapped, young Martin secured the first prize in the examination at the end of the course. *Sic semper diligentibus.*

A delayed communication has just reached us from some literary critics residing in the southwestern part of the state. They enter a few complaints, which we believe to be founded in good intention if not reason, and which accordingly we shall keep well in mind in writing subsequent articles. These critics complain that our college notes lack proper tone and spirit and that the artless simplicity of our notes contrasts but badly with the careful writing and classical finish of notes from neighboring institutions. They complain further that our periods are too often unpleasantly anti-climacteric, and that our

words and modes of speech are often such as would be tabooed on the ranch or even in the mining camps, as, for example, when we write "the news is" for "the news are." And lastly they complain (and here is where we most heartily entertain their complaint) that at times we too gaudily decorate our style with Latin words and phrases. As for themselves they say (and we doubt not) that they are good Latinists and of course readily catch and thoroughly comprehend our meaning; but they think, and quite rightly, that it would be in far better taste for us to patronize more faithfully our vernacular, and, for example, to say "cave dog" instead of "cave canem" if we mean troglodyte!

WILL ATTEMPT TO SUPPRESS DOWIEISM.

London, Oct. 13.—Medical men of England will ask the incoming parliament to pass an act for the suppression of Dowieism. At present there are no laws to fit the alleged healer's case, and one is being prepared. Dowie is not much in favor among the clergy or professional men, and his methods have caused no little comment. In answer to charges against him Dowie openly defies any one to interfere with his preaching divine healing, and claims he is well able to look out for his own interests.—*Rocky Mountain News.*

Preliminary steps have been taken by the Tri-State Medical Society of Tennessee, Alabama and Georgia, to secure medical legislation in these three states for the purpose of regulating or prohibiting the marriage of habitual criminals, persons afflicted with incurable diseases, drunkards and victims of harmful drugs.

SOCIETY REPORTS

The Denver and Arapahoe Medical Society

A regular meeting of the Denver and Arapahoe Medical Society was held at the Brown Palace Hotel the evening of Tuesday, October 9, 1900, President Fleming in the chair. The minutes of the last meeting were read and approved.

The following were proposed for membership: Dr. Donald Kennedy, Jackson building, a graduate of the Kentucky School of medicine of the class of 1884, by Drs. J. N. Hall and C. P. Conroy, Dr. J. P. Miller, McPhee Building, a graduate of Jefferson Medical College of the class of 1882, by Drs. C. P. Conroy and C. K. Fleming. Dr. Roy Inglis, California Building, a graduate of the College of Physicians and Surgeons of New York, of the class of 1890, by Drs. George E. Tyler and C. K. Fleming.

The Board of Censors having reported favorably on the name of Dr. John A. Murray he was elected to membership.

The regular scientific program was then carried out.

1. An address, "The Treatment of Puerperal Infection," was delivered by Dr. F. H. McNaught.

2. A paper on "The Prevention of Puerperal Septicemia,*" by Dr. H. G. Wetherill.

DISCUSSION.

Dr. Jayne: In the prevention of

avoidable diseases there is none so easily avoided as puerperal fever, provided the obstetrician understands asepsis, and follows the detail of an operating room at the bedside of the patient.

Dr. Wetherill has so covered the treatment of cases that I can say nothing on this point, but those cases in which the birth canal has been torn should be treated surgically. While the acid bacillus destroys the potency of some germs it does not wholly destroy that of the gonococci. Personally, I use the anti-partum and post-partum douche, especially if there exists a suspicion of infection. I believe the obstetrician should thoroughly acquaint himself with the patient previous to labor, and then conduct an aseptic labor, thus protecting mother and child. Cases of infection occur mostly in poorer classes, from the so-called practical nurse. I believe the obstetrician should administer the douche, and not the nurse.

Twenty years ago Dr. Gaillard Thomas laid down rules for the puerperal stage. These embraced principally prevention. A little care permits of cases being guarded even in poor patients the gauze can be baked and moistened with bichloride.

Dr. Freeman: Mr. President, let me say that Dr. Wetherill is preaching a gospel more needed than that of the

*Published on page 429.

Sunday schools; the beauty of the plan being simplicity.

In view of the method of infection widely differing in various cases, we must at all times consider the source.

First; Infection from outside.

Second; Infection per se.

Third; Infection through the circulation.

Under the first class we must prevent infection by using surgically clean instruments and dressings.

Second; Cleanse an infected vagina.

Third; Building up the constitution of the patient prior to labor.

The use of rubber gloves is an excellent solution of the problem of preventing infection by means of the hands.

The best means is to absent one's self from lying in cases when attending other septic diseases, but this would materially interfere with business, so that rubber gloves and a clean suit, recognizing aseptic technique, greatly aid the obstetrician in preventing puerperal fever.

Dr. T. M. Burns: Mr. President, Dr. Wetherill deserves great thanks for his paper, but I do not agree with him in everything. In nearly 1,000 cases of labor that I have seen I have not lost one case which I attended from the beginning, and I consider the post partum douche absolutely essential in washing out all effete material. The glass vaginal tube is a great innovation as it precludes the nurse handling it, likewise the permanganate method precludes infection.

I do not believe that rubber gloves will prevent sepsis unless the operator

has an education in asepsis—some antiseptic powder should be used before putting on gloves.

Filthy surroundings amount to nothing if the vulva is kept clean and hemorrhage avoided. The printed slips of Dr. Wetherill's are excellent. I am not too hard on the midwife, as I do not think she loses more cases than the doctor.

Dr. Wetherill: Mr. President, this whole matter is one of education. We should not let the nurse do anything unless previously instructed. The important point of wearing suits is to protect the patient, not the doctor. The aseptic technique should be very simple, and should include a new nail brush, clean suit and sterilized vulva pads. If this is carried out puerperal septicemia would be a thing of the past. The use of bichloride as a douche is worthless, as it coagulates albumen in the birth canal. The vagina must be surgically scrubbed, as this precludes spread of infection through lymphatics. If the douche is used the tube should be inserted to the fundus, thus driving all material outward by the backward flow. It is impossible for a nurse to know her exact location with a douche. Gentlemen who douche to-day will not say anything about it in three years' time.

3. Two papers:

a. Abdominal Testicular Ectopia Associated with Inguinal Hernia; Management.

b. On the Surgical Importance of Apparently Simple Carbuncles and Furuncles of the Upper Lip, Dr. Charles A. Powers.

The committee on "The Dead Beat Question" presented the following report:

We, the undersigned committee appointed by the Denver and Arapahoe Medical Society to enquire into the advisability of organizing a Physician's Protective Association, the object of which would be to protect the members of such association from being imposed upon by persons who habitually neglect or refuse to pay their bills, beg to submit the following:

1. We would recommend that the president of the Denver and Arapahoe Medical Society appoint three members who shall have power to add to their number if thought advisable, for the purpose of organizing a Physician's Protective Association, which association shall not be connected with or governed by any medical society, but shall be a distinct organization, and shall be managed by its own members.

2. We recommend that the object of this association shall be the mutual protection of its members from "dead beats," and that from time to time a list of such names as are furnished by the members shall be published, but we further recommend that each member shall be allowed to employ his own collector.

3. We recommend that membership in this association shall be limited to physicians whose standing would entitle them to membership in any regular county medical society.

(Signed.)

WM. N. BEGGS,

J. M. BLAINE,

ALFRED MANN.

Moved by Dr. Edson, and seconded

by Dr. T. M. Burns, that the report be laid on the table. Carried.

Dr. Jackson, chairman of the committee on Tests for Sight and Hearing in the Public Schools, reported progress, also that Dr. Eskridge asked to be relieved from service on the committee. The committee recommended that the resignation be accepted and that the president make an appointment to fill the vacancy. The president appointed Dr. E. W. Stevens.

There being no further business, on motion the meeting adjourned. The attendance was 43. C. P. CONROY,
Secretary.

The firm of D. Appleton & Co. has been reorganized. Papers of incorporation of the new firm of that name were filed with the secretary of state in Albany with a capital of \$3,000,000, "to purchase, acquire and carry on book printing, publishing and other business of D. Appleton & Co., the Appleton Manufacturing company and the A. D. Johnson company."

Trouble came to D. Appleton & Co. soon after the failure of Harper Brothers last March. The liabilities were for over a million dollars, but creditors were paid dollar for dollar. The cause of the assignment was said to be because creditors were made uneasy by the Harper failure and refused to extend notes for over \$850,000.

The dental department of the University of Denver opened its session for 1900-1901 October 8.

EXCHANGES

**Bal neotherapy
as Practiced by
the Indians.**

Dr. Richard K. Macalester, of Glenwood Springs, Colo., writes that the healing properties of Glenwood Springs thermal waters were, many years prior to the advent of the first settlers, appreciated by the Ute Indians who populated this district. They called the largest spring, with a flow of seventeen hundred gallons per minute Yampah (Little Bear) and utilized its waters for bathing and drinking purposes. Besides this there are numerous other springs of uniform chemical constituency of their sulpho-saline-alkaline waters, and a temperature of 126 degrees F., in which the average person can hold his hand but a few seconds without experiencing great discomfort. The Utes are said to have come from far and near in search of health at this natural sanatorium, and when a patient was pronounced to be a fit subject for balneological administration by his wise medicine-men, the following method was employed: Across two long poles a blanket was stretched and fastened, on which the victim was laid. His comrades then, grasping the ends of the poles, raised and carried him to the hot pool, in which he was immersed. A cry of agony, or the length of endurance, was the signal for the "bath attendants" to lift him out of the water, and with brief intermissions this procedure was repeated as often as the patient could stand it.

The Indians were also not unfamiliar with the virtues of the unique cave baths, which are small caves in the rocks by the river side, in the floors of which thermal springs boil up, heating and saturating the air with vapor. These baths are very potent in an eliminating sense, exerting a specific sudorific action far in excess of plain water vapor of a much higher temperature.

School Hygiene. Dr. W. A. M. A. Carhart, of New York City, contributes the following article on School Hygiene and Medical Inspection of Schools, to the August number of the *Medical Review of Reviews*:

School hygiene has been officially recognized by boards of health and education only within the past few years. Probably the first trial of medical inspection of schools in this country was made in Boston in 1894 during an outbreak of diphtheria in a primary school, as reported by Dr. Wm. L. Robins.

Of fourteen cases, seven were discovered in unsuspected children. By daily laryngological examination of all the children and thorough disinfection of the infected rooms, not a single case developed beyond those known to have been infected at the time the epidemic was discovered. Further preliminary work showed that 1,156 of the children in the Boston public schools out of 8,965 examined were not fit to remain

in school, of whom 267 were suffering from contagious and infectious diseases. Daily medical inspection of the Boston public schools was soon afterwards instituted, and is now in force. The Twenty-Fourth Annual Report of the Health Board of Boston declared that the work has disarmed all opposition, and has fully met the expectations of the Board of Health.

New York began similar inspection in 1896, and Chicago followed in 1898 with inspection of the schools on notification by physicians of contagious cases in attendance. This imperfect system is to be replaced this year in Chicago by daily medical inspection on the Boston plan, mainly through the efforts of Dr. Christopher and Dr. Allport, the latter of whom is well known for his excellent work in establishing medical school inspection in Minneapolis previous to his removal to Chicago.

1. The personal habits of a child have much to do with its health and comfort while at school. Cleanliness of body and clothing must be insisted upon for the child's own sake, as well as for the welfare of others. Dirt is a great carrier of infection, while cleanliness will prevent much disease. In most school statistics, skin and scalp diseases are found to outnumber all other forms of disease, and contagious eye diseases come next in frequency. Diphtheria and the exanthemata are often discovered in their periods of invasion. All such children must, of course, be excluded, and kept away until the danger of infection is past. It is only in this way that school epidemics can

be avoided. Many public school children have vicious habits, which must be discovered and corrected. Here the medical inspector will depend largely upon the ability and common sense of the teacher, who should take up and carry on the duties of the parents by being watchful for defects of character. In many instances there is a physical basis of vice, and the advice of the physician may do more to correct such habits than much punishment. The normal child is always healthy in body and sound in character.

2. All children are not alike in mental power, and should not be taught as if they were. Backward and dull children need particular care. An inattentive child is often defective in the special senses, possibly slightly deaf, or may be handicapped by high refractive error and unable to apply attention for any length of time to close work. When a child, bright and active on the playground, is restless, inattentive and careless in the schoolroom, we may be sure there is a reason for such want of application. Such children usually have imperfect eyes, and cannot concentrate their vision on their books beyond a very short time in consequence of the strain upon the ciliary muscle in the effort to maintain visual acuity. They are apt to be called stupid and lazy when they fall behind in their studies, and because they are bright and quick about everything except their lessons, they may be considered mischievous and bad.

3. Hygiene, in reference to school environment is such a large subject that it can be barely touched upon in

the present paper. It is also, in the main, a question of sanitary science, which concerns specialists in that department rather than the medical profession, but it is of vital interest to us as involving the health of our children. School buildings should be healthy in location, and be furnished with adequate playgrounds. The buildings themselves should, of course, be well built, with dry cellars, and lavatories made safe by modern plumbing. Good ventilation is a necessity in all the rooms, and no overcrowding of space should be allowed. The desks and seats should be adjustable to the size of the children. The situation of the windows and the color of the painting on walls and ceiling should be such that sufficient light of the proper shade is available for each and every child.

**Carcinoma of the
Oesophagus.**

Dr. Julius Friedenwald, A. M., M. D., Baltimore, Md., cites in the *Maryland Medical Journal*, an interesting case of carcinoma of the esophagus:

Mrs. J. H., married, aged thirty-one years, first consulted me on October 15, 1899. Her family history was good. Her father had died of an accident; her mother is still living, as are likewise all of her brothers and sisters. She had always been in good health until the end of July, when difficulty in deglutition was first noted. This difficulty was at first noted only with solid food, and finally about the middle of September there was absolute inability to swallow solids, while

even liquids were now passed into the stomach with difficulty. Recently the act of deglutition was accompanied with great pain; there was frequent regurgitation of mucus, but never of blood; there was constant eructation, and there was obstinate constipation.

On examination the patient is found to be a well-nourished woman, with well-developed muscles; glands are nowhere enlarged; the mucous membranes are red; the heart and lungs normal; the examination of the abdomen is negative. The blood examination shows 5,000,000 red-blood corpuscles and 10,000 white; the urine is normal. In introducing the soft tube a resistance was felt, through which the tube could not be passed. When measured this was found to be 43 cm. from the teeth. Various sizes of soft rubber tubes were tried, but could not be passed through the stricture. The hard rubber tubes were then introduced. The large size bougies could not be passed into the stomach, but those of small size were passed without difficulty. The obstruction was constantly located from 42 to 45 cm. from the teeth. The second deglutition murmur was delayed often to forty seconds, and at times was entirely absent.

The patient was admitted to the Union Protestant Infirmary on December 11, 1899, under the care of Dr. J. M. T. Finney. On December 12, 1899, Dr. Finney attempted to pass a small-sized bougie under ether anesthesia, but was unable to pass it into the stomach; a gastrotomy was then performed, and a small olive sound

passed from below, when an obstruction was discovered 10 cm. above the cardiac orifice of the stomach; the bougie was passed through the strictured area, a string was attached to it and withdrawn, and larger sounds were then drawn through from below attached to the cord, until the largest passed with ease. In passing the first or second sound something was felt to give way. The stomach was sutured to the abdominal wall and closed.

The patient did well until the morning of December 16, 1899. Her temperature had remained between 99 degrees and 101 degrees, and her pulse 100 to 108, and she was able to retain small quantities of egg albumen, milk and broth. On the morning of December 16 she complained of intense pain in the left chest. There was marked dyspnea, and during the afternoon the temperature rose to 103.4 degrees and the pulse to 140. Dr. Pancoast, the resident physician, at once discovered a pyo-pneumothorax in the left chest, and aspirated a quart of brownish pus.

At 12 a. m. the next morning Dr. Finney resected a rib at the angle of the scapulæ, when a large amount of foul-smelling pus was evacuated; a drainage tube was introduced. The patient never rallied; her temperature rose to 104 degrees and her pulse to 160, and she died early the same morning.

Only a limited autopsy through the back wall was permitted, and the finger was passed from this opening into the esophagus through the perfora-

tion. A portion of the esophagus containing the cancer was removed. It consisted of an oblong ulcerated mass, the largest diameter $1\frac{1}{2}$ cm. in length, being longitudinal to the esophagus, its shortest diameter being 0.5 cm. in length. The circumference of the ulcer was very hard and indurated, the base soft and dipping deeply into the mucosa; along the inferior surface of the ulcer the opening was found indicating the point of perforation. In placing the esophagus in its normal position an almost complete obstruction is presented at the point of stricture. Microscopically, the mass was found to be an adeno-carcinoma.

This case is interesting as showing one of the rather rare results of cancer of the esophagus.

The *Pennsylvania Medical Journal* contains an interesting case of Jamaica ginger amblyopia, by Edward Stieren, M. D., of Pittsburg, Pa.

**Case of Jamaica
Ginger Ambly-
opia.** A careful search through American ophthalmic literature reveals eight recorded cases of blindness following the ingestion of ginger. The first case recorded is by Archibald G. Thompson of Philadelphia, in the *Ophthalmic Record* for November, 1897. Assistant Surgeon J. B. Greene reports a case in the annual report of the supervising surgeon general of the United States Marine Hospital Service for 1898, which appears to be one of the six carefully reported cases of Hiram

Woods of Baltimore, in the *Ophthalmic Record* for February, 1899.

The history of the present case is as follows: N. C. R., aet. 36; occupation is a contractor and builder. His parents are living and healthy. Patient has always been well; has had some of the eruptive fevers of childhood, but does not remember which ones; has had several attacks of gonorrhœa, but denies syphilis; has been a moderate user of tobacco, but a periodical alcoholic, going on a spree once every six weeks or two months, which usually lasts from three to four days. He is a robust, well-built man, 5 feet 9 inches in height, and weighs 180 pounds. He was first seen Sunday evening, October 15, 1899, and appeared totally blind, requiring the services of a friend to lead him. He had been drinking heavily on Saturday, and, sobering up Sunday morning in a "dry" community where no liquor of any kind could be obtained, purchased from a storekeeper a box of a dozen bottles of Jamaica ginger, each containing about an ounce.

The entire dozen bottles were consumed before noon, the first four diluted with water, the remaining eight undiluted. About noon he dropped into a drunken stupor, awaking about 3 p. m. totally blind, but with no other symptoms except some gastric uneasiness and a dull headache. He was seen about 6 p. m., when examination revealed the following condition:

Pupils widely dilated and unaffected by light or accommodation; eyes widely open and the balls in constant motion, which could, however, be controlled by will; conjunctivæ slightly injected,

tension unchanged, media clear. There was no change whatever in disks or vessels, and beyond a slight amount of retinal edema, fundi were normal.

Vision was almost nil; he could see a hand moved at 12 inches; incandescent light had a red appearance to him. Cornea almost totally insensitive to touch with camel-hair pencil.

The treatment consisted of immediate confinement to bed in a darkened room. Three hot foot-baths were given during the night, and 20 grains each of calomel and compound jalap powder in divided doses. One-eighth grain pilocarpine muriate was given twice during the night, hypodermatically. This treatment caused active diaphoresis and catharsis, and at 9 o'clock the next morning patient was able to count fingers with either eye at 10 inches.

The pilocarpine was continued, one-eighth grain hypodermatically at intervals of six hours, and calomel in one-grain doses every two hours for the next two days. Pilocarpine was then discontinued and 20-grain doses of iodide of potassium supplanted the calomel, slight tenderness of the gums occurring.

Patient's vision continued to improve, and on the fifth day he was allowed to come to my office; vision in each eye, 20-30.

At no time was there any change or departure from the ophthalmoscopic picture first described. His field of vision could not be obtained when first seen, but in the second office examination, the fifth day after his indiscretion, no scotoma nor narrowing of the field

could be demonstrated. Pupils now react strongly to light and accommodation. Can read Y1 with an effort and reads Y4 readily. Has I D. hypermetropia with which, corrected, V in each eye—20-20.

I have seen this patient from time to

time since his attack of acute blindness, the last time being March 27th, and, having been thoroughly frightened, he has totally abstained from alcoholic stimulants. His ocular condition remains the same as just noted.

NEWS ITEMS

Dr. Alfred Stille, for nearly twenty years professor of theory and practice of medicine at the University of Pennsylvania, died at Philadelphia, his home, September 24. His estate is said to amount to over \$100,000, of which Yale University receives a considerable sum.

Another medical college has been organized in Colorado. It will be located in Cripple Creek, and will be designated as the Colorado Post-Graduate Medical College. The name is harmless enough, and gives no indication of its vagaries. It will be devoted to hypnotism, electricity and osteopathy. The incorporators are H. A. Sims, Thos. W. Sims and Louis W. Ferrill.

Ten applications for embalmer's licenses took the examination before the state board of health October 3. The following successfully passed the examination: W. M. Moran, Canon City; C. W. Fairplay, Colorado Springs; John L. Dryer, Cripple Creek; Lennies M. Sutton, Isaac L. Maxwell and J. L. Ford, Denver; and Mrs. W. B. Peterson, Blossburg, N. M.

The National Wholesale Druggist's Association and the Proprietary Association of America, which held their annual meeting in Chicago last month, advocated that congress pass a general law regulating the inspection and sale of drugs.

The fifteenth annual session of the Colorado State Homeopathic Society was held in Denver October 5 and 6. The attendance was the best in the history of the society. Officers elected for the ensuing year are as follows: President, Dr. W. D. Howe, Canon City; first vice president, Dr. J. Wiley Anderson, Denver; second vice president, Dr. M. M. Hatfield, Denver; secretary, Dr. Edwin J. Clark, Denver; treasurer, Dr. Lilian I. Pollock, Denver.

C. H. Howe & Co. are about to break ground for a new three story building to be used throughout as a laboratory, and which will be one of the finest in the country. They have decided to sell out their retail business, give all their attention to manufacturing, and offer their retail business at 622 Sixteenth street for sale. Starting in

a small way ten years ago, Mr. Howe has built up one of the best paying retail drug businesses in the state, and only retires from it because his manufacturing business has grown in such proportions that the two cannot be managed together. Anyone wishing a good thing will do well to correspond with him.

There have been various stories in the newspapers this year to the effect that Mrs. Mary Baker Eddy, the Christian Science seeress, was in bad repair and unfit for exhibition. Scoffers at this gifted woman declared that she kept herself in strict retirement, and had even called in a doctor. They even suggested the possibility that she had an understudy who looked enough like her to be shown for a moment to the faithful when they clamored with especial fervor to see her. Perhaps it was to set at rest these impertinent stories that Mrs. Eddy accepted the invitation of the Governor of New Hampshire to appear on Governor's day (September 6) at the state fair in Concord. The report of her visit says that she reached the fair-grounds at three o'clock in the afternoon, was received by the city and state authorities, and escorted by a troupe of mounted police and a mounted aid from the governor's staff, made the circuit of the race track amid the plaudits of admiring thousands. It must have been an excellent thing for the fair. There is no greater curiosity in New Hampshire than Mrs. Eddy, unless it is her following, and that far outstretches the

limits of the Granite state.—*Harper's Weekly*.

Lansing, Mich., Sept. 19.—The controversy between the state board of health and Detroit doctors over the reporting of cases of consumption to the local health officers has been passed upon by the supreme court.

The lower court held the law relative to contagious diseases does not cover consumption, and ruled out the testimony offered to prove consumption a disease dangerous to public health.

The supreme court says there is no danger line that the courts can take judicial notice of, and that this is a question for a jury to decide. A new trial was ordered.—*Denver Evening Post*.

DEATH OF DR. JOSEPH M'KEE.

Dr. Joseph McKee died at his home in Denver Thursday, September 27. He leaves a widow, Mrs. Martha J. McKee, and one daughter. He was born in West Virginia seventy-two years ago and graduated from the Cleveland Medical College. He was surgeon in the Thirteenth Iowa regiment during the civil war.

DEATH OF DR. R. B. SIBLEY.

Glenwood Springs, Colo., Sept. 27.—A party consisting of Dr. R. B. Sibley, W. O. Brown and C. L. Gilbert of Aspen, and W. H. Tuttle and L. A. Ferguson of Colorado Springs, left Aspen on the 16th instant for a six week's hunting trip. On Saturday last they arrived at Shingle peak where they

were snowbound for two days.

The elevation, over 11,000 feet, proved too high for Dr. Sibley, who complained that the altitude seriously affected him. On Wednesday the party left on their return to a lower altitude, but had proceeded but three miles from their camp when Dr. Sibley fell forward on his horse and expired. His body was packed into Gypsum, fifteen miles, in deep snow and was brought here this morning on a freight train. It was taken to Aspen on the evening's train. The doctor left a wife and child surviving him. — *Rocky Mountain News*.

ANNUAL REPORT OF ST. LUKE'S HOSPITAL.

In making its nineteenth annual report the St. Luke's Hospital Aid Society submits the following figures:

The number of patients in the hospital October 1, 1899, was 65; during the year, 945 patients were received; and up to September 25, 1900, making a total of 1,010, out of which 65 were Episcopalian, 87 Roman Catholics, 16 Jews, and of other denominations 843. There were about 78 deaths. From 635 to 658 operations were performed.

The training school had on October 1, 1899, 25 pupils, and since that time 15 have been admitted. There were 11 pupils who graduated and of these, rejected or resigned, were from 8 to 19. October 1, 1899, there were 27 pupils remaining in the school. Since its foundation 50 pupils have graduated.

A contribution of \$5 for a nurse's

outing was made by Mrs. Spalding.

Mr. Burill will continue in the capacity of superintendent. Miss Pridham will be succeeded by Miss May Rusley as head nurse. Mrs. Newton is housekeeper and Mrs. Schlitzburn will superintend the diet kitchen. Miss Burtis will act as matron of the Nurse's home.

SCHOOL INSPECTION.

If the city council will grant the necessary additional appropriation every school in Denver will be provided with a medical examiner after January, 1901. The health commissioner is now having statistics showing the necessity therefor prepared for submission to the council. It is but keeping in line with the progress of other cities. Boston, New York, Cleveland—all the larger eastern cities have medical examiners for the schools, whose business it is to visit the schools every morning and send home any children who are not well. The statistics show that the good accomplished and the epidemics prevented among children are truly wonderful. This is especially true in Boston.

It has long been known that school-houses are responsible for the spread of children's diseases to a remarkable extent. As soon as school is out in the summer scarlet fever cases decrease greatly in number, and begin to increase with the re-opening in the fall. The intention is to appoint a practitioner for each school district. The boards of education, particularly that of district No. 1, are heartily in sympathy with the movement. He will

visit every room and decide which children should be sent home, because of suspicious symptoms, poor eye-sight or other causes. There will be one room in the school to which all children indisposed will be sent, and here the physician will make a thorough examination. He will not prescribe, but simply order the child home to the care of the family physician.

Until the first of the year Dr. Henry of the department has been delegated to look after school inspection and devote his attention particularly to scarlet fever.

SMALL POX IN COLORADO.

STATE BOARD OF HEALTH, DENVER.

In compliance with the regulations adopted by the National Conference of State and Provincial Boards of Health at Toronto in 1886, and at Washington in 1887, it becomes my duty to inform you that small pox has been reported from the following points in the State of Colorado during the month ending September 30th, 1900:

Aguilar, Las Animas county, 13 cases, August 18 to September 8; Antlers, Las Animas county, 2 cases, August 18 to 25; Colorado Springs, El Paso county, 2 cases, August 10; Denver, Arapahoe county, 12 cases, August 1 to September 24; Glenwood Springs, Garfield county, 4 cases, August 27 to September 12; Golden, Jefferson county, 2 cases, August 29 to September 4; Ft. Collins, Larimer county, 3 cases, September 25 to 30; Huerfano county, 6 cases, September 5

to 24; North Park, Larimer county, 70 cases, April 25 to October 1; Pueblo, Pueblo county, 49 cases, August 5 to September 27; Rockvale, Fremont county, 6 cases, September 3 to 23; Walden, Larimer county, 9 cases, September 15 to 23.

Total for the State of Colorado for the month of September, 1900, 178 cases. Number of deaths, 1. Yours truly,

G. E. TYLER, M. D.,
Secretary.

THE NATIONAL JEWISH HOSPITAL FOR CONSUMPTIVES.

The following twenty-nine trustees have been selected for the National Jewish Hospital for Consumptives for the coming year:

Ben Altheimer, St. Louis.
Nathan Lory, Kansas City.
Martin A. Marks, Cleveland.
Sol Levy, Joseph May and Max Senior, Cincinnati.
Harry T. Schloss, Terre Haute.
Edward Kolish, Richmond, Va.
Samuel Heavenerigh, Detroit.
A. Abraham, Brooklyn.
Joseph Miller, Baltimore.
Leo A. Loeb, E. J. Kohn and Hannah J. Solomon, Chicago.
Dr. Albert Abrahams, San Francisco.
Adolph Baer, St. Louis.
Max Bamberger, Philadelphia.
J. Wertheimer, St. Paul.
Hannah Beinstein and Emanuel Lehman, New York.
Solomon Ginsberg, Buffalo.
Henry N. Oberndorfer, Milwaukee.
Isidore Newman, New Orleans.
Elias Lowenstein, Memphis.
Philip Hamberger, Pittsburg.
A. Anfenger, Meyer Friedman and Alfred Muller, Denver.
Samuel Graebfelder, Louisville.

COMMUNICATIONS.

THE WOMAN PHYSICIAN.

To the Editor of The Colorado Medical Journal:

The women physicians of the Rocky Mountain region will not trouble themselves to state in print what "they are doing in and for their profession;" nor will they "urge in their defense" anything to account for the shortcomings credited to them in a recent editorial in this journal. It would be hardly fair to suppose that the rest of the profession share in the ignorance on this subject professed by the editor.

Misrepresentations and criticisms offered from a wrong point of view may, however, be corrected.

A rule is here laid down that "every physician should be a member of the national, state and local representative societies. Then, if time and money permit, the various special and restricted societies have a right to be considered, but not otherwise." Many of the women physicians of this city incline rather to agree with Dr. Senn, who, in his presidential address to the A. M. A. some years ago, suggested that the younger members of the profession should train themselves in small local societies, later join the county, when somewhat further on, the state society, and at last they might hope to be worthy to belong to the A. M. A., and present papers deserving of national attention. That many agree with the editor, and prefer attempting to push

to the top of the ladder without climbing the lower rungs is perhaps unfortunate for the larger societies.

The editor must have a strangely perverted view of the value of contributions to the advancement of the general medical profession if he measures them only by papers written. "One single paper represents the sum total of the contributions of the women physicians" during the year. Fortunately not everyone measures work by what is said or written about it. The above statement is contradicted in the same paragraph when it is said that "but nine papers" were read in the Denver Clinical Society, again measuring work by the writing done. Is it not really a matter of congratulation that the women physicians at least, have not yet wholly succumbed to the *cacoethes scribendi*, now almost epidemic?

The query is to whether the three (?) local medical journals receive "lavish" support comes poorly from the COLORADO MEDICAL JOURNAL, which has been taken by most of the members of the D. C. S at all events. It is to be feared that any journal which permits itself to indulge in apparently purposeless attacks upon individuals or parts of the profession will deprive itself of much of the support it would otherwise earn.

In a second equally objectless article on the same subject the editor alludes to the Denver Clinical Society withdrawing its reports from the pages of the

JOURNAL. It was expressly stated to the representative of this paper that the society had taken no action in the matter. The secretary, on her own responsibility, declined, until otherwise instructed, to allow the name of the society to be connected with a paper of whose policy the editorial in question was a sample. "The right to expression of opinion on any subject," unless "trammelled," by ordinary courtesy and a due amount of judicious forethought, is apt to result in a needless giving of offense and resulting estrangement. M.

THE CLINICAL LABORATORY.

October 4, 1900.

To the Editor of the Colorado Medical Journal:

SIR—I have read with interest your editorial in a recent number of the JOURNAL on the establishment of pathological laboratories in Denver. I beg to ask you if it is not possible that the introduction to this article was written under something of a misapprehension. I need hardly say that defeat of any measure looking toward the establishment of such a laboratory as was outlined in my brief communication to the Colorado State Medical Society in 1899 has been, and is, farthest from my own thoughts, or from those of any member of the committee which made a report at the meeting of the Medical Society last June.

This committee felt that a requisite for the successful establishment of a

laboratory would be hearty co-operation on the part of each of the medical schools located in Denver. They discovered that this co-operation could not be obtained at this time, and so reported. Personally, I am entirely convinced of the desirability of some such plan as that proposed, and earnestly hope that the future may bring a demand on the part of the physicians of the state for the most thorough and competent work in all branches of pathology. It is difficult for me to see how adequate work can be accomplished until the pathologists receive a definite yearly salary.

So much am I in sympathy with a movement for the establishment of a central laboratory of pathology that I gladly agree to be one of twenty physicians who will guarantee its support three years. Very truly yours,

CHARLES A. POWERS, M. D.

NOTE.—The introduction to the editorial in question was not written under a misapprehension, but it must be confessed that its wording is such that a misconstruction as to its meaning is very easily possible. No animadversion at all was intended for the action or motives of any of those quoted, but they were simply taken as a text for the expression of the rest of the article. Dr. Powers' position as regards pathological laboratory work is sufficiently well known to all those who know him or have heard him speak on the subject as to need no justification or commendation.—EDITOR.

BOOK REVIEWS

HEMMETER. Diseases of the Stomach, Their Special Pathology, Diagnosis and Treatment, With Sections on Anatomy, Physiology, Chemical and Microscopical Examination of Stomach Contents, Dietetics, Surgery of the Stomach, etc. By John C. Hemmeter, M. D., Professor in the Medical Department of the University of Maryland, Baltimore. With many original illustrations, a number of which are in colors. Second edition, enlarged and revised. Octavo, 898 pages; price, \$6 net; cloth. P. Blakiston's Son & Co., 1012 Walnut street, Philadelphia, Pa.

In our review of the first edition of Hemmeter's "Diseases of the Stomach," we said: "One looks in vain for any subject pertaining to gastrology which the author has not treated." Only two years have passed, and yet the second edition can be recognized as coming from the same author only by the book wearing this old garb, and bearing on its title pages the name of the author. The book has been "overhauled and renovated from attic to cellar." Not a page but has a word, a line, a sentence, a thought more or less. Several chapters have been recast or rewritten, and the number of chapters increased by the addition of the subjects of Hypertrophic Stenosis of the Pylorus, Obstruction of the Orifices, The Use and Abuse of Rest and Exercise in the Treatment of Digestive Diseases. The last mentioned chapter afforded us a great deal of pleasure, for we are inclined to believe that it

was at our suggestion that the chapter on Rest has been added. It was refreshing to note that the author is not afraid of being dubbed a crank for having adopted in his own daily diet the suggestion of Dr. Dewey's two-meal-per-day plan.

I cannot, at this juncture, refrain from making a short digression. When Dr. Dewey, of Meadville, Pa., wanted to publish his book, "The True Science of Living," he could not then find a publisher in the United States, presumably on account of his "peculiar" views concerning digestion, fasting, physiology of the brain and the advocacy of the two-meal-a-day fare. Dr. Dewey had to go to England in search of a publisher. That was some eighteen years ago. The right kind of a "crank" does not mind waiting a couple of decades for recognition. It is certainly a pleasure to record that men like Haig, Hemmeter and others have adopted his science of living, and recommend its precepts in their respective books.

Since Dr. Hemmeter was kind enough to commend our contribution to the subject of "Rest; a Neglected Factor in the Treatment of Gastro-Intestinal Diseases" (p 285), we will repay the compliment by wondering at the fact that, notwithstanding his broad and just assertion that "all anatomical diseases of the stomach require rest (p. 283), he has nevertheless omitted to even mention rest in discussing the treatment of motor insufficiency of the second de-

gree, and gastropotosis, two pathological conditions in which rest, in our opinion, is of paramount value.

We cannot find enough words of praise for the remarkable page-titles used in this work. Anyone who will take the trouble of comparing the page-headings of Hemmeter's book with any other medical book will find that there is a difference between the two. He will find that each and every page of the 898 pages composing the book bears a separate and distinct title. If we are not mistaken there is not another book in the market whose pages are titled on the same principles except that of Dr. Edward Jackson (*Diseases of the Eye*, P. Blakiston's Son & Co., publisher). We will not discuss the subject of priority. These two books are the pioneers in the reform of page-titles, and we hope that all the authors will follow suit. The usefulness of such titles can be summarized in the following statement: Open such a book at random and a glance at the title of the page will be sufficient to acquaint you with the contents of that particular page, something one cannot find out from the ridiculous page-titles in vogue. Anyone who wishes to know more about the subject of page-titles is referred to an article by the writer of these lines entitled *From Title-Pages to Page-Titles* (*Medical Libraries*, Vol. III, No. 1, 1900.)

We note with pleasure the augmented lists of bibliography following almost every chapter, and we can again say that the index of authors and subjects is complete. The many new illustrations are both useful and orna-

mental. In a word, Dr. Hemmeter's work represents so much that is good and original that he and we have a right to be proud of it.

C. D. SPIVAK.

THE STUDENT'S MEDICAL DICTIONARY, including all the words and phrases generally used in medicine, with their proper pronunciation and definitions, by George M. Gould, A. M., M. D., author of "An Illustrated Dictionary of Medicine, Biology, and Allied Sciences;" "30,000 Medical Words Pronounced and Defined;" "The Meaning and the Method of Life;" "Borderland Studies;" editor "*Philadelphia Medical Journal*;" President 1893-1894, American Academy of Medicine. Eleventh Edition, enlarged and revised, with many illustrations. Published by P. Blakiston's Son & Co., Philadelphia; price \$2.50.

The medical student has often to exhibit a strict economy in his purchases of books, and in many cases overlooks or discounts the value of a dictionary, depending on the appended glossary found in a few medical publications.

This dictionary, which is especially designed for the use of the student, earns for itself the hearty endorsement and recommendation of the profession at large. It is admirably adapted in every way for the beginner in medicine. The tables having a most systematic arrangement, covering thoroughly the field of ready reference. The revision of the recognized pronunciations and definitions, together with the newly coined words, permits of no excusable error on the part of the student.

PROGRESSIVE MEDICINE. Vol II., 1900.

A quarterly digest of the advance and improvement of the medical and surgical sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics in Jefferson Medical College of Philadelphia, Pa. Bound in cloth; 401 pages, and 8 engravings. Lea Brothers, New York and Philadelphia. Price, annually, \$10.

The contributors to this volume have succeeded in collecting the most recent data on the progress of medicine and surgery. In no other similar publication can be had the review of abdominal surgery which Dr. William B. Coley of New York City, pens for this edition. The subjects of hernia and surgery of the stomach are treated in such elaborate detail that the general practitioner is able to grasp the technique described without witnessing the operation per se.

Many pages have been devoted to that all-absorbing topic of appendicitis. The approved methods of McBurney, Fowler, Maclaren, Richardson and Bull are each reviewed and compared, permitting the reader to possess a concise knowledge of this greatly discussed medico-surgical problem.

Dr. John G. Clark, Professor of Gynecology in the University of Pennsylvania, has collected the current ideas on the therapeutics of transfusion of liquids in the post hemorrhagic stage, revealing the use and abuse in this branch of surgery in an excellent and convincing manner. His treatment of pelvic diseases brings out the up-to-date views of the gynecologist.

Dr. Alfred Stengel, Clinical Professor in the University of Pennsylvania,

writes exhaustively on the diseases of the blood, diathetic and metabolic diseases, diseases of the glandular and lymphatic system. These pages embody the recognized teachings of the lately created department of clinical medicine. The research work of foreign laboratories has been carefully noted, and the value of organic extracts impartially criticized. The contributions to general literature are freely quoted, thus making this section of the book most valuable as an index to the foremost workers in clinical diagnosis.

Dr. Edward Jackson, Emeritus Professor of Ophthalmology in Philadelphia Polyclinic, gives a general review of the value of diseases of the eye to the general practitioner. No minor infection is slighted in preference to some of the more important diseases of the eye.

The therapeutics of the newer mydriatics is briefly referred to, yet giving sufficient information to warrant the practitioner to carefully consider these recently improvised drugs before endorsing the advertised criticisms in trade journals.

Will wonders never cease? W. W. McArthur, a local Christian Scientist, states in the daily papers, that they immediately report to the Health Department all cases of contagious diseases coming under their care. As they claim to disbelieve in the existence of disease at all, that might readily be true and still no reports be made, but that they should make such an acknowledgment almost surpasses credence.

THE COLORADO MEDICAL JOURNAL

...AND...

WESTERN MEDICAL AND SURGICAL GAZETTE

A Scientific Medical Journal, Published in the Interest of the Profession of Colorado and Adjoining States—A Journal of Science, of News and of Medical Lore.

VOL. VI.

DENVER, COLORADO, NOVEMBER, 1900.

No. 11

ORIGINAL COMMUNICATIONS.

Ligature of the Innominate for Aneurism of Right Common Carotid and Subclavian.*

By ALBERT L. BENNETT, M. D., DENVER, COLO.

Local Surgeon Colorado & Southern R. R.

The innominate artery was first tied by Mott, and Smyth of New Orleans tied the innominate, the carotid and vertebral with success.

In 1893 Mr. Coppinger of Dublin tied the innominate, the carotid and subclavian, the patient being exhibited in London two years later. In 1895 Dr. Herbert L. Burrell of Boston ligated the innominate for fusiform aneurism of the carotid subclavian and innominate arteries. His patient lived one hundred and four days, the immediate cause of death being arterio-sclerosis and dilated heart. Two ligatures of silk were used.

This operation has been performed, so far as reported, only thirty times, the case of Dr. Burrell being the twenty-ninth and the one I have the

honor of reporting this afternoon being the thirtieth.

While taking a trip on the N'Komo river in the French Congo, West Africa, in May, 1898, I was called in haste to see a man in a small Bakela village. The man was sitting on a stool in front of a hut supported by two women. The patient showed marked symptoms of dyspnoea. The women drew my attention to a "swelling" in the patient's neck on the right side; and they told me it had been "growing there a long time," that the man often fell dead (fainted). After administering some aromatic spirits of ammonia, the man gradually recovered, was able to talk, and gave me the following brief history:

His throat had been growing large

*Reported at the thirtieth annual meeting of the Colorado State Medical Society, 1900.

on the right side for many seasons (lit. years). He often felt like choking to death, and to get his breath at such times was very hard. The movements of the swelling (throbbing) caused him much distress, also the quick movements of his heart. Several times all things became dark, and later his people told him he had fallen dead (had fainted). Sleep is disturbed by the throbbing, and for the past moon

of negroes. The inequality of the pupils was very marked, the right being much dilated. No sign of cardiac enlargement, apex beat in fifth interspace about one quarter inch inside the nipple. A marked systolic souffle in the mitral region, and aortic insufficiency was illustrated by a very decided diastolic murmur. Over the tumor in right neck there was found a very marked diastolic impulse. In fact, I would



The Patient.

(month) he has suffered pains in the swelling and in the region of the heart. He eats well, but feels worse after eating. Suffers from frontal headaches. Bowels constipated. Patient further stated that he knew an enemy had succeeded in bewitching him, causing this sickness, and that it would surely kill him.

Examination revealed the following: A well developed muscular male, aet. 55 (?) of tribe Bakela; Bantu family

better describe the condition if I said a very *violent* diastolic impulse; its force was positively alarming. Examining the cricoid cartilage, I felt beneath my fingers a most decided and peculiar impulse, but I do not feel justified in calling it a "tracheal tug," for it did not feel like an aortic pulsation; yet I could feel beneath my fingers distinct movements of the trachea. I am unable to explain the cause of these movements. After completing the examina-

tion, I felt that the case was one of aneurism of the common carotid artery, involving the subclavian. I am very thankful that the patient permitted me to take a photograph plainly showing the tumor in the right anterior neck; for belonging to a tribe of savage, untutored negroes in West Africa, I expected my request to "make a book" would be refused. The natives call all pictures and writings "a book;" they dread a camera, feeling that it bewitches them.

My great regret is that it was absolutely impossible to obtain permission to hold a post-mortem examination. This was out of the question, for upon asking permission to do so, word went rapidly through the town that I wanted to open the body to steal the witch that had killed the man, and then keep it to bewitch others. Offers of cloth and goods were of no avail, and the much coveted specimen could not be obtained. The photographs I present to-day for your inspection will show the tumor fairly well, although the negative became somewhat speckled from the dampness of the African climate permeating my traveling cases.

The condition of the patient was extremely bad, and as he could not be persuaded to return with me, I hastened back to my station and returned to the village the next day to operate on him. Before departing I gave him a large dose of potassium iodide, and left a supply of the same to be given at stated intervals, hoping the drug would to some extent lessen the arterial tension. I also gave him one-quarter grain of

morphiæ sulphas. The next day (May 12th) I started back in an open boat with instruments and dressings.

My only assistants were two native boys. One of these boys was most helpful in assisting me and had proved himself very apt at previous operations. Fortunately I obtained the use of a fairly decent house, the walls built of clean bark, with glass windows purchased from traders at the capital; and a good solid board table was placed at my disposal. The patient was anæsthetized and very thoroughly cleansed; the entire head, face, neck, chest and arms being thoroughly scrubbed and washed with ethereal soap and washed off with alcohol.

Two tightly rolled sheets were placed under shoulders of patient, so that the head fell well backward; the right arm was strapped down to the side, causing a depression of the clavicle and thus giving better opportunity for reaching the carotid.

The first incision was about 10 cm. in length and followed the sterno-cleido-mastoid down to the sterno-clavicular junction. An incision about 11 cm. above and parallel to the clavicle met the first incision at the sterno-clavicular junction. Flaps, including skin, superficial fascia and platysma, were turned back and the sterno-cleido-mastoid sectioned about 3 cm. above its insertion. Division of the sterno-thyroid and sterno-hyoid brought into view veins which I took to be the inferior thyroid. Not daring to take the least risk of a hemorrhage from wounding these veins,—with the assistance at

my disposal—I tied them off with two ligatures and divided between. The triangular flap was turned up and hooked back. The dissection had been done very slowly and cautiously and the large aneurism of the carotid was now fully exposed, which involved the first portion of the sub-clavian.

I had fully decided before commencing the operation not to attempt any work in the dark, but to turn back the clavicle and if necessary remove a portion of the sternum. The next step, cutting away a portion of the manubrium at the interclavicular notch, was slow work, needing great care; for with undue haste considerable damage might have been done by the heavy bone forceps slipping. Finally a portion of the sternum was cut through and turned back with the clavicle, and supported by a flat retractor turned on its edge, giving a good view of structures beneath and room to work. The right and left brachio-cephalic veins were in view, the innominate artery, and on its right side the pneumogastric nerve. All this time my black assistants were doing good work, especially the one giving the ether. I had prepared for a ligature a piece of flat tape, 3 mm. in width, which I hoped, by tying carefully, to leave around the vessel—a ligature having a broad, flat surface which would exert even pressure and lessen the danger of cutting through the artery and causing death by the usual sequela, hemorrhage. With a small edged file I had so enlarged the eye of my aneurism needle that the tape ligature could be easily threaded. After opening the sheath on a director, two tape ligatures were

passed around the innominate and tied. I am not sure how far the lower ligature was from the aorta, but think the distance was fully one inch. Carefully feeling that portion of the innominate between the ligatures and not detecting any sign of pulsation, I severed it between the ligatures. The entire field of operation was now wiped with gauze sponges; the severed ends of the innominate were perfectly dry, with a stump outside each ligature measuring fully 5 mm.

Then the clavicle was pressed back in position, the wound closed, and the patient carried to bed. He rallied well and seemed cheerful. Strychnia sulphate was given—1-30 grain every three hours—and at the same time one-eighth grain of morphia hypodermically. I decided, if the man lived, to remain in the village for at least ten days and watch the case. All pulsation in the neck had ceased, and I could find no pulse at the wrist. On the second morning after the operation I began to hope for a successful issue, since the patient seemed so bright and cheerful, only complaining of cold. More blankets were put on him and a fire lighted. During the third night I was awakened from my sleep in great haste by one of the men, who told me the patient “suddenly sat up in bed and then fell dead.” The moaning of women across the street could be plainly heard.

Upon reaching the bedside I found the man quite dead, the immediate cause of death being secondary hemorrhage.

I am greatly indebted to Dr. Herbert

L. Burrell of Boston for the report of his case operated in 1895, which contains a most complete list of the twenty-nine complete operations and five unfinished, performed previous to the one now reported; which, with the kind permission of Dr. Burrell, is herewith appended:

OPERATIONS.

No. 1. Valentine Mott, New York, 1818. Death, 26th day, by hemorrhage. Silk ligature.

No. 2. Graefe, Berlin, 1822. Death, 68th day, from hemorrhage. Operation for subclavian aneurism. Longitudinal incision along anterior edge of sterno-mastoid down to sternum. Ligature not described.

No. 3. Norman, Bath, 1824. Death, 3d day, from hemorrhage. Operation for subclavian aneurism. Ligature and operation not described.

No. 4. Arendt, St. Petersburg, 1827. Death, 8th day, from sepsis. Operation for subclavian aneurism. Ligature not described. Operation: Incision three and a half inches long, on inner border of sterno-cleido-mastoid to half an inch below border of sternum.

No. 5. Hall, Baltimore, 1830. Death, 6th day, from hemorrhage. Operation for subclavian aneurism. Ligature and operation not described. Up and walking about 5th day.

No. 6. Bland, Sidney, 1832. Death, 18th day, from hemorrhage. Operation for subclavian aneurism. Ligature, thread. Operation: Incision made, extending upwards about two inches from the inner edge of the sternum, and about an inch and a half downwards,

below the inner margin of that bone. The sternal insertion of the mastoid muscle was divided, and dissection further prosecuted by the careful separation of the fibers of the sterno-thyroid and sterno-hyoid muscles in their longitudinal direction.

No. 7. Dupuytren, Paris, 1834 (reported, but not performed by him). Death, 3d day, from hemorrhage. Operation for subclavian aneurism. Operation and ligature not described.

No. 8. Lizars, Edinburgh, 1837. Death, 21st day, from hemorrhage. Operation for subclavian aneurism. Ligature not described. Operation: Incision made, beginning at about one inch over the sternum, and extending four inches along the inner margin of the sterno-mastoid muscle. The sterno-hyoid muscle was then carefully divided, bringing into view the sterno-thyroid muscle, which was cut across in a similar manner.

No. 9. Hutin, Paris, 1842. Death, 12 hours after operation, from hemorrhage. Operation for secondary hemorrhage after a penetrating wound. Ligature and operation not described.

No. 10. Gore, Bath, 1856. Death, 17th day, from hemorrhage. Operation for subclavian aneurism. Hemp ligature. Operation: Usual longitudinal incision, and sternal attachment of sterno-mastoid were divided.

No. 11. Pirogoff, St. Petersburg, 1856. Death, 48 hours, from probable septicemia. Operation for subclavian aneurism. Ligature and operation not noted.

No. 12. Cooper, San Francisco, 1859. Death, 9th day, probably from sepsis. Operation for subclavian aneurism. After 5th day became restless, had dyspnea, retention, etc., till death. Ligature not described. Operation: Incision made, four inches long, in a line parallel, and half an inch above the upper margin of the clavicle, commencing internal to the sterno-clavicular articulation, and terminating near the anterior margin of the trapezius muscle. A transverse incision was then made, commencing a little to the inner side of the center of the first, and extending upwards, external to the sternocleido-mastoid muscle, terminated two and a half inches above. The summit of the sternum and the sternal extremity of the clavicle were removed. This barely made room sufficient to enable one to reach the arteria innominata, owing to the large size of the aneurismal tumor at that point.

No. 13. Cooper, San Francisco, 1860. Death, 34th day, from hemorrhage. Operation for subclavian aneurism. Ligature not noted. Same operation as before, a portion of the sternum and clavicle being removed.

No. 14. Smyth, New Orleans, 1864. Recovery. Operation for subclavian aneurism. Carotid and innominate ligated, and 54 days later the vertebral also ligated. Ligature not noted.

No. 15. Lynch, 1867. Death, 12th day, from hemorrhage. Operation for secondary hemorrhage after gunshot wound. Ligature and operation not described.

No. 16. Porter, Dublin, 1867. Died

of hemorrhage six weeks after. Operation for subclavian aneurism. Ligature not described. Clamp applied to innominate for three days and then removed. Mott's operation, V-shaped incision.

No. 17. Bickersteth, Liverpool, 1868. Death 9th day, from hemorrhage. Operation for subclavian aneurism. Silk ligature. Operation: The usual triangular incision was made, dividing the sterno-mastoid, the sterno-hyoid and the sterno-thyroid muscles. Passed a lead wire around the innominate and held it by a clamp. Two days after, the wire separating, a silk ligature was applied to the artery in two places.

No. 18. A. B. Mott, New York, 1868. Death, 23d day, from hemorrhage. Aneurism burst into pleural cavity. Operation for subclavian aneurism. Mott's operation. Innominate and carotid tied.

No. 19. Partridge, Calcutta, 1870. Death 1½ hours after, from hemorrhage. Operation for secondary hemorrhage. Previous operation, ligature for aneurism of carotid 13 days before. Operation and ligature not described.

No. 20. Buchanan. Death in a few minutes from shock. Operation for subclavian aneurism.

No. 21. O'Grady, Dublin, 1873. Death, 20 hours after operation, from shock. Operation for subclavian aneurism. Ligature and operation not described. Removed inner two inches of clavicle.

No. 22. Thompson, Dublin, 1882.

Death, 42d day, from hemorrhage. Operation for subclavian aneurism. Tape ligature of ox-aorta. Two incisions: first, along clavicle, beginning with anterior border of sterno-mastoid muscle and extending outwards; second, along inner border of same muscle, beginning at same place. Sterno-mastoid, sterno-hyoid and sterno-thyroid divided.

No. 23. Banks, Liverpool, 1883. Death, 37th day, from hemorrhage. Kangaroo tendon. Operation for subclavian aneurism. Innominate and carotid ligatured. Mott's operation.

No. 24. Bull, New York, 1884. Death, 33d day, from hemorrhage. Operation for subclavian aneurism. Innominate, right common carotid and vertebral arteries were all ligatured simultaneously with a double catgut ligature.

No. 25. May, Birmingham, 1886. Death, 19th day, from hemorrhage. Catgut ligature. Operation for subclavian aneurism. Incision along inner third of clavicle and a second down line of common carotid, two meeting in episternal notch. Flap dissected back, and sterno-mastoid, sterno-hyoid and sterno-thyroid muscles divided.

No. 26. Durante, Rome, 1887. Death, 16th day, from hemorrhage and hemiplegia. Operation for subclavian aneurism. Mott's operation. Innominate, carotid and vertebral ligatured.

No. 27. Lewtas, India, 1889 (Mendon Hospital, Peujab). Recovery at report, 43 days after. Catgut ligature. Operation for hemorrhage following traumatic aneurism of subclavian. Li-

gated carotid and innominate. Incision along inner border of lower end of sterno-mastoid. Partially cut sterno-hyoid and sterno-thyroid.

No. 28. Coppinger, Dublin, 1893. Recovery when exhibited at end of 42 days. Operation for subclavian aneurism. Innominate and carotid both ligated. Operation and ligature not described.

No. 29. Burrell, Boston, 1895. Recovery, all symptoms relieved and patient out and about. Two silk ligatures on innominate. Operation for fusiform aneurism of carotid, subclavian and innominate arteries. Death from arterio-sclerosis and an enlarged and dilated heart on the 104th day.

No. 30. Albert L. Bennett, West Africa, 1898. Death, third night from hemorrhage. Two tape ligatures on innominate, the vessel being severed between.

Bardenheuer has a number of times exposed the innominate artery and the contiguous parts by resection of a portion of the manubrium sterni and the sterno-clavicular articulation, while removing tumors which involve the root of the neck. He is convinced from his experience that the ligature of the innominate can only intelligently be carried out by resection of a portion of the sternum and sterno-clavicular articulation.

Bujalski, of St. Petersburg, is said to have ligatured the innominate artery twice. No published reports of the cases can be found, and they are considered by most authors not sufficiently authentic to be classed among the

others. Not given by Thompson, because he said he could not verify them. Given by Le Fort, also by Velpeau.

UNFINISHED OPERATIONS.

No. 1. Porter, W. H., Dublin, December, 1831. Patient up and about when last reported on the 61st day. Operation for subclavian aneurism.* Innominate exposed, which was greatly dilated. Impossible to put ligature around. Wound dressed and healed.

No. 2. Hoffmann, New York, 1839. Operation for subclavian aneurism. Exposed the innominate, intending to ligature. Finding the vessels so large, he considered it inexpedient to proceed and abandoned the operation.

No. 3. Key, London, 1844. Patient died 23d day after operation. Attempted to ligature innominate for aneurism of the innominate, but had to desist on account of size of tumor.

No. 4. Peixeto, Rio Janeiro, 1851. Silk ligature. Common carotid had been ligatured previously for a tumor of the ear, and several hemorrhages resulting, an "expectant" ligature was passed around innominate in case of further hemorrhage, but it was not tightened. No further hemorrhage occurring, it was removed in five days.

No. 5. Charity Hospital, New Orleans, 1894. In a personal letter, Dr. Edmond Souchon speaks of a case where a colleague exposed the innominate by removal of a part of the sternum, but not ligatured because it was found so greatly enlarged.

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EL PASO COUNTY MEDICAL SOCIETY.

EL PASO, TEX., Oct. 25, 1900.

To the Medical Profession of Texas, New Mexico, Arizona and Mexico:

On the 13th day of October, 1900, the undersigned committee was appointed by the El Paso County Medical Society to invite the members of the regular medical profession of Texas, New Mexico, Arizona and Mexico to meet in El Paso, Texas, on the 17th day of January, 1901, for the purpose of organizing a tri-state or territorial medical association. (The El Paso Mid-Winter Carnival will be held January 17, 18, 19, 1901.) The committee hopes to have a large and enthusiastic meeting, that it may prove both pleasant and profitable, and they will expect every member of the profession throughout this territory to lend his personal efforts toward making the meeting a grand success.

Volunteer papers are requested from all who are willing to contribute, and you are especially requested to send in your name and the title of your paper at the earliest possible date, that the program may be completed and sent out in due time.

Will you kindly advise the committee of your intentions?

Reduced rates on all railroads.

S. T. TURNER, M. D.,

W. N. VILAS, M. D.,

F. W. GALAGHER, M. D.,

Committee.

Pulmonary Embolism, with Report of Cases*

By F. E. WAXHAM, M. D., DENVER, COLO.

Judging from the small number of cases reported, one would conclude that pulmonary embolism, or infarction, was a very rare disease. The first reported case was in 1852, and from that date to 1893 Sperling (Max) was able to collect but thirty-three cases, to which he added two, making altogether thirty-five cases. I have been able to collect the histories of but seventeen cases, to which I am able to add but one case coming under my own observation. I am convinced, however, that pulmonary embolism is more common than is generally supposed. I have recently learned of two cases occurring in the practice of my associates that have never been reported, one following childbirth and terminating fatally, and the other associated with an acute phlebitis, also terminating fatally. Both cases presented typical symptoms. Indeed, I believe that there are few physicians of large experience who have not met with one or more cases.

Mild cases are often, undoubtedly, overlooked, while severe ones are sometimes mistaken for other conditions. This is not strange, inasmuch as small infarctions may give rise to few or no symptoms, while the symptoms arising from large infarctions are often confusing, especially if suddenly fatal.

Pulmonary embolism is the result of the plugging of a pulmonary artery by an embolus, the consequence being an

extravasation of blood into the pulmonary tissue. Embolic infarctions occur in the form of pyramids with the base usually upon the pleura. They vary greatly in size, although always retaining the same shape unless centrally located. The average size is about that of an egg, although they may be as small as a filbert or even smaller, or may be sufficiently large as to involve a whole lobe of a lung. They are most frequently found in a lower lobe posteriorly. They may be single or multiple, according to the number of emboli finding lodgment in the pulmonary vessels. They are dark colored, brown or black, and are airless and colorless. The emboli producing infarctions may be derived from the right side of the heart, the result of the sweeping away of the vegetations from an acute or chronic endocarditis, or they may be derived from the venous system as a result of a phlebitis, or from operations upon or injuries of veins, or they may be derived from a puerperal uterus. Our text books generally give as the most common cause of pulmonary embolism blood stasis, associated with or resulting from acute or chronic disease of the heart, but the reported cases show by far the most common cause to be thrombi from the uterine sinuses during the puerperal state. Of the cases whose histories I have been able to collect, eleven occurred in the puer-

*Read at the Colorado State Medical Society, June 21, 1900.

peral state, one during an attack of phlebitis, one following an operation for varicose veins, one following an operation for hemorrhoids, one following an injury to the sub-clavian vein, one from flushing a hematocele after an operation, and one as a result of a mitral stenosis associated with a uterine fibroma. If the emboli are septic, or if they become infected with pus organisms by way of the air passages, necrosis, gangrene, or pulmonary abscess results.

The symptoms will vary according to the size and location of the infarctions. If small and centrally located, there may be no symptoms or signs by which we can diagnose the condition. If a large branch of the pulmonary artery is obstructed by a clot, sudden death may occur with the symptoms of asphyxia, frantic efforts for breath, rapid, feeble and irregular heart action, unconsciousness and not infrequently convulsions. When the condition is not immediately fatal there is great restlessness and anxiety with a fear of impending death which is undoubtedly due to the dyspnoea. When the obstruction is in one of the smaller branches the leading symptoms are intense dyspnoea, rapid and shallow respiration, pain, rapid and thready pulse and bloody expectoration, either pure blood or mucoid masses tinged with blood. The cough is frequent and painful.

The physical signs will depend upon the size and situation of the infarction. When centrally located, many of the physical signs are absent or beyond our recognition, and we must base our diagnosis upon the rapid and shallow res-

piration, painful cough and characteristic expectoration. When these symptoms are seen in a puerperal case, or in connection with a phlebitis or following operations upon the veins, we may be well assured of the diagnosis. If the infarction is near the pleural surface and of considerable size, the physical signs are well marked and easily recognized. In addition to rapid and shallow respiration we will elicit dullness on percussion, increased fremitus on palpation and bronchial respiration on auscultation. We should distinguish between pulmonary embolism and pneumonia. In both cases the onset is sudden, but in pneumonia there is a chill, followed by high fever, rapid, bounding pulse and high temperature. Pulmonary embolism is rarely ushered in by a chill, and while there may be great dyspnoea, the temperature is not high, and again the pulse, instead of being full and bounding, is rapid, feeble, thready and often irregular, accompanied by a cool, moist and clammy condition of the skin. The history of the case in pulmonary embolism will aid greatly in making the diagnosis, while the microscopical findings will make the diagnosis conclusive. In the expectoration of pneumonia we will find the diplococcus pneumoniae, while in pulmonary embolism only leukocytes and red blood corpuscles.

The prognosis will depend largely upon the extent of the lesion. Large infarctions are apt to be suddenly fatal, while those resulting from septic thrombi or that become subsequently infected may lead to gangrene or abscess, consequently the prognosis

should always be guarded. Of the thirty-five cases collected by Sperling, twenty-seven were fatal, while of the eighteen I have been able to collect there were nine deaths.

I would here submit a report of collected cases:

Case 1. (Bowen, O., *Liverpool Clinical Journal*, 1889, Vol. IX, pp. 70-74). Female, age 25. July 2, 1887. Cause: Puerperal state, large embolus in pulmonary artery from a uterine sinus. Symptoms: Headache, nausea, palpitation, pulse 160, breathing quick, ghastly, anxious, thirst, limbs cold, lips pale. Treatment: Sig. ammonia fort. oz iv in iced water or milk every half hour, eight days; later, hourly during the day and two hours at night. Recovery; January 20, 1889, in excellent health.

Case 2. (Rose, P., *Indian Medical Gazette*, 1894, Vol. 29, pp. 258-259. Calcutta.) Female, age 25, December 24, 1893. Cause: Puerperal state, varicose veins of both legs, coagulation in uterine sinuses had extended through iliac veins to interior of vena cava. Probably due to violent effort to rise in bed. Fibrinous clot lodged in small branch of pulmonary artery. Symptoms: Sudden headache and shortness of breath, great dyspnoea, extremities cold and bloodless, slight delirium, general anasarca, temperature 105. Treatment: Morphia gr. $\frac{1}{4}$ every 12 hours for four days, followed by hot flaxseed meal over abdomen. Recovery February 13, 1894.

Case 3. (Fell, G. E., *Journal American Medical Association*, 1891, V. 17, pp. 90-93.) Female, age (?). March

3, 1891. Cause: Puerperal state. Symptoms: Dyspnoea, cyanosis, albumenuria, rapid heart action, quick respiration, pulse 130-170, respirations 50. Treatment: Oxygen gas (1,200 gallons). Recovery.

Case 4. (Gray, A. G., Daniel's, *Texas Medical Journal*, 1887-1888, V. 3, pp. 130-132.) Female, age (?). March 26, 1886. Cause: Puerperal state. Symptoms: Pain in right side, great weakness, deep pallor, bloated face and extremities, anorexia, restless, anxious, breathing heavy, pulse 120, temperature normal, heart tumultuous, lips purple, pulse irregular. Treatment: Whisky, ammonia carb., digitalis. Result: Died six hours after beginning of dyspnoea.

Case 5. (Hebb, *Westminster Hospital Reports*, 1891, V. 7, pp. 71-76.) Female, age (?). February 12, 1889. Cause: Hemorrhoidal operation. Symptoms: Dyspnoea, urgent. Patient died in a few minutes.

Case 6. (Hebb, *Westminster Hospital Reports*, 1891, V. 7, pp. 71-76.) Male, age 35. August 20, 1891. Cause: Influenza. Symptoms: Bronchitis, dyspnoea, cough, limbs swollen, expectoration of blood, one side of face paralyzed, slight jaundice, pain in right chest and abdomen, heart sounds feeble, pulse 116, respiration 40. Treatment not reported. Death. Post-mortem: Hemorrhagic infarction, much more intense in right than in left lung. Both right and left pulmonary arteries plugged with clots. Main veins of both right and left lower extremities plugged with large clot.

Case 7. (Humphrey, Sir George.

Lancet, 1893, V. 2, p. 629.) Female, age 48. November 14, 1892. Cause: Injury to sub-clavian vein. Symptoms and treatment not reported. Death occurred suddenly four days after injury. Pulmonary arteries plugged with large clot.

Case 8. (Glenn, J. H., *Transactions Royal Academy of Medicine*, Ireland, 1886, V. 14, pp. 291-296.) Female, age (?). December 9, 1895. Cause: Puerperal state. Varicose veins of both legs. Symptoms: Became suddenly faint and breathless on the ninth day after confinement. Heart tumultuous, pulse 110-140, cyanosed, highly nervous, temperature 101-103. Treatment: Digitalis, spirits ammonia aromat. spirits ætheris co. morphia, paradehyde, sulphonal. Recovery.

Case 9. (Johnson, R., *Transactions Pathological Society*, London, 1888-1889, V. 40, p. 45.) Female, age 54. December, 1888. Cause: Phlebitis. varicose veins. Symptoms: Sudden pain in chest and dyspnoea. Treatment not given. Death in 9½ hours. Post-mortem: Firm clot in pulmonary artery six to seven inches in length.

Case 10. (Remfry, L., *Transactions Clinical Society of London*, 1891, V. 24, pp. 222-226.) Female, age 33, July 17, 1899. Cause: Clot from hematocoele, dislodged by douche. Symptoms: Douche at 8:30; at 8:40 seized with extreme dyspnoea. Deep cyanosis, unconsciousness, pulseless, extremities cold, respiration ceased and patient apparently dead. Treatment: Artificial respiration for 2½ hours; oxygen gas, ammonia carb., senega. Recovery.

Case 11. (Vogt, H., *Norsk Maga-*

zine, f. *Lægevidensk*, 1897, pp. 1130-1140.) Female, age 31. August 30, 1896. Cause: Puerperal state. Symptoms: Dyspnoea, anxiety, death impending, pulse 160-170, later 96; respiration 36, temperature 37.4 to 38.4 Cent., anorexia. Treatment: Morphine suppositories. Recovery.

Case 12. (Vogt, H., *Norsk Magazine*, f., *Lægevidensk*, 1897, pp. 1130-1140.) Female, age 26. 1897. Cause: Puerperal state. Secondary syphilis. Symptoms: Pulse 100, temperature 39.3 Cent., attack on twelfth day after labor, respiration short and irregular, cold sweat. Treatment: Hypodermic injections of naphtha. No relief. Death in a few minutes. Post-mortem: Large clot in pulmonary arteries.

Case 13. (Vogt, H., *Norsk Magazine* f., *Lægevidensk*, 1897, pp. 1130-1140. Female, age 38. 1897. Cause: Puerperal state. Symptoms: Dyspnoea, cyanosis. Treatment: Artificial respiration. Death in ten minutes. No post-mortem.

Case 14. (Vogt, H., *Norsk Magazine* f., *Lægevidensk*, 1897, pp. 1130-1140.) Female, age (?). 1863. Cause: Puerperal state. Symptoms: Pulmonary embolism eight days after confinement. Treatment, (?). Death in a few minutes. Post-mortem: Three gangrenous lesions in lungs, embolus in left lung.

Case 15. (Oeder, *Berliner Klin. Wochenschrift*, 1892, p. 411.) Female, age 44. December, 1891. Cause: Mitral stenosis and uterine fibroma. Symptoms: Dyspnoea, pain in right leg, unconsciousness; rapid, irregular respiration, cold sweat, extremities

cold, lips and nails cyanotic, pulse rapid, expectoration of pure blood. Treatment: Sub-cutaneous injection of camphor oil, morphine, cardiac stimulant. Recovery.

Case 16. (Sperling, Max, *Zeitschrift fuer Geburtschuelfe und Gynaekologie*, 1893, V. 27, pp. 239-265.) Female, age 25. September 12, 1892. Cause: Puerperal state. Symptoms: Labor normal; attack came on three weeks later, headache, dyspnœa. Treatment: —. Death occurred in two or three minutes. Post-mortem: Emboli in right and left pulmonary arteries.

Case 17. (Sperling, M., *Zeitschrift fuer Geburtschuelfe und Gynaekologie*, 1893, V. 27, pp. 239-265.) Female, age 18. November 26, 1892. Cause: Puerperal state. Symptoms: Dyspnœa, anxiety, oedema, nephritis, bloody expectoration, labored breathing, pulse 130. Treatment: Three injections of camphor and three of ether in ten minutes, followed by two other injections. Recovery by December 14, 1892.

Case 18. (Waxham, F. C.) Male, age 50. October 9, 1899. Detachment of thrombus following operation for varicose veins. Symptoms: Sudden dyspnœa, palpitation of heart; rapid, weak pulse, pallor; cool, moist condition of skin; cardiac murmur lasting a few hours, followed by pain in left lung; frequent painful cough; rapid, shallow respiration; expectoration of pure blood, followed by mucoid masses tinged with blood. Treatment: Oxygen gas, ammonia carb., liquor ammonia acetatis, strychnia and digitalis. Recovery after three weeks' illness.

As illustrative of typical attacks of

pulmonary embolism, I desire to allude to a few cases in detail. John H. Glenn cites the following case. The patient was delivered of second child December 9, 1895. Before and after marriage she suffered from varicose veins of both legs. On the third day the attention was called to the left leg, where the internal saphenous vein was found thickened and inflamed. The usual treatment was pursued. The limb was elevated, a lotion of lead and opium was applied, covered with cotton wool and bandaging. The patient was progressing well. On the eighteenth day she had a visitor and probably over exerted herself; she became suddenly faint and breathless, and there was tumultuous beating of the heart. She was given digitalis and diffusible stimulants. At 11 p. m. on the 19th her temperature was 101 and pulse 140, and the respiration 40. There was marked cyanosis and she was highly nervous. A cardiac murmur was present which lasted four days. With the disappearance of the murmur the temperature rose to 103.4 and a localized area of pneumonic consolidation appeared at the back of right lung corresponding with the middle lobe. At the same time there was rusty expectoration. Diagnosis, embolism. The treatment consisted in the administration of morphine to allay restlessness which was extreme, digitalis, aromatic spirits ammonia and spirits aetheris co. The morphia was changed for paraldehyde and then to sulphonal, which proved the most serviceable. The author had twice before met with pulmonary embolism. February 20, 1896, the heart

was normal but there was still some dullness over the lower portion of the right lung. This, however, disappeared, and the patient made a perfect recovery.

In the discussion of this paper Dr. Parsons said that he had seen a post-mortem on a woman in Vienna who had got up on the third day after confinement. A large embolus was found, completely obstructing the pulmonary vessels.

Dr. Tweed said that pulmonary embolism was a very rare affection.

Dr. Doyl had a patient who had several attacks of severe dyspnœa after confinement. She was treated with carbonate of ammonia and ether, from which she derived much benefit and finally made a good recovery.

Dr. Kidd had met with but one case of pulmonary embolism. It occurred a few hours after delivery and the patient died in spite of treatment by stimulants. (Royal Academy of Medicine, Ireland, 1896, Vol. 14, pp. 291-296.)

Leonard Remfrey reports the following instructive case. The patient entered St. George's Hospital, July 17, 1889, with a hematocele. It was opened per vaginam and a large clot evacuated. A large glass drainage tube was inserted and the cavity washed out with boro-glyceride solution, one drachm to the pint. August 17 the patient was considered convalescent, but it was decided to give a last douche with the irrigator. At 8:30 the douche was given. At 8:40 it was discontinued as the patient complained of severe pain over the sacrum; then, without the least warning, she was suddenly seized with extreme dyspnœa, the

face became deeply cyanosed and the patient became unconscious. No pulse could be detected at the wrist, the extremities were cold, the cornea insensitive. The breathing ceased entirely at 9:15 and the patient to all appearances was dead. Artificial respiration was begun and continued for two and a half hours, until 11:45, when the respiration was rapid and shallow and of the Cheyne-Stokes variety. It soon became very feeble and artificial respiration was resumed again up to 2:15 p. m. Oxygen gas was given at 12:20 and this appeared to immediately turn the tide. Under this treatment the patient rapidly improved in color. The pulse now for the first time became perceptible at the wrist, though it could not be counted. The patient recovered consciousness at 4 p. m. The pulse then was 120, the respiration 20 and the lips were rather blue, together with considerable dyspnœa. At 5 p. m. the pulse was regular and 110, but very weak. The patient had a very bad night, suffering from paroxysms of dyspnœa about every half hour, lasting ten minutes. The next day the attacks of dyspnœa were not so frequent and the following day the cyanosis disappeared. The cough, however, still remained troublesome, for which senega and carbonate of ammonia were given.

An examination of the chest in front revealed that the left side was expanded more than the right. All over both lungs were ronchi without tubular breathing. The chief reasons for believing the case to have been one of pulmonary embolism were:

(1.) The suddenness of the attack.

(2.) Tumultuous breathing followed by a few sighing inspirations and finally cessation of respiration.

(3.) The rapidly developing cyanosis, which disappeared gradually, but not entirely for forty-eight hours.

(4.) The occurrence subsequently of a localized pneumonia in a small area of the middle lobe of right lung.

(5.) The inferior expansion of the right side of the chest as compared with the left.

(6.) The occurrence of the attack after manipulation which might easily have dislodged a clot.

A case coming under my own personal observation well illustrated the symptoms and nature of pulmonary embolism. October 9, 1899, I was called by one of our leading surgeons to see a patient upon whom he had operated a few days previously for varicose veins. The patient had violated the strict and explicit injunction to keep perfectly quiet, thinking it hardly necessary when he was doing so well. As a result a thrombus became detached from the seat of operation and entered the venous circulation. He was taken suddenly with palpitation and irregularity of the heart action, dyspnoea, restlessness and great anxiety. The skin was cool and moist. Upon examination of the heart a well marked cardiac murmur was found. The palpitation, the irregularity of the heart, the rapid and feeble pulse, the dyspnoea and cardiac murmur all coming on suddenly, together with the history of the case, made it evident that a large blood clot was entangled in the tricuspid valve.

In the course of a few hours, under the use of oxygen gas by inhalation, carbonate of ammonia in full doses, and strychnia hypodermically, the embolus disappeared from the heart and the murmur, irregularity and palpitation subsided. With the disappearance of the embolus from the heart the symptoms became less urgent for a short time, but were quickly followed by severe pain in the lower lobe of the left lung, continued and severe dyspnoea, restlessness, rapid and shallow respiration and great anxiety. There was but little fever, the temperature not rising over 100°, but the pulse was rapid, feeble and thready. The patient appeared almost as in collapse, the surface of the body being bathed in cool perspiration. For two or three days the characteristic expectoration of pure blood in small masses occurred, followed by mucoid expectoration tinged with blood. Under the use of morphia hypodermically to relieve the pain and restlessness, the continued use of oxygen, strychnia, ammonia and digitalis, recovery finally took place after an illness of three weeks.

The practical deduction, that should be emphasized in the consideration of this subject, is the importance of absolute rest and quiet in all cases of phlebitis, during the puerperal state, and especially after all operations upon veins.

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The Use of Creosotal in the Treatment of Acute Lobar Pneumonia*

BY B. B. FRANKLE, M. D., CRIPPLE CREEK, COLO.

The world has set a rather rapid and dizzy pace for those who would keep abreast of the advance and progress which characterize the present age. Inventive genius, intelligent thought, logical experimentation and ceaseless activity of both body and brain, all aim at one common goal—perfection. Despite the gradual and steady progress of the practical mind toward perfection, many gaps yet remain in our knowledge, and notably in the domain of medicine. That we are making good, substantial progress, no one will gainsay, and on the other hand, no one will deny that we are very far distant from the solution of many strange phenomena of frequent occurrence.

The chemist, like the busy bee, improves each shining hour, and has simply overwhelmed us with the products of his labors. Many of these are worth-

less, a few are worthy of our trust and confidence, all are ingenious and clever. Creosotal is one of the comparatively new remedies which have come to stay. For obvious reasons, the consideration of a single remedy for a single therapeutic effect, must be brief and will assume the nature of a monograph, and not an extended, didactic, dissertation.

I shall submit my subject to you under the following arbitrary heads:

1. Nature of remedy.
2. Its physiological action.
3. Advantages over allied remedies.
4. Its therapeutic application to the treatment of pneumonia.
5. Its administration.

Nature of Remedy—Creosotal is the somewhat fanciful name for a pure and modified form of creosote carbonate. It contains 92 per cent of creosote but is free from the noxious, poison-

*Read before the Cripple Creek District Medical Society, October 9, 1900.

ous, caustic and unpleasant effects of that drug.

Physiological Action—Since creosotal is simply another form of creosote, it naturally follows that its physiological action will be that of its mother remedy. According to Wood, creosote has never been carefully and thoroughly studied. The absorption and elimination of this agent are very rapid; within nine hours following its administration, it has been obtained from the urine and it would appear that about two-thirds of the dose escapes from the body through the kidneys in the time mentioned. A portion is destroyed in the body, and a portion is thrown off by the lungs. It occurs in the urine in the form of oxidized educts, but chiefly as creosol and guaiacol sulphates. I have purposely omitted its local action and toxicology, as they have no bearing on the present consideration. We see from a study of the above little reason for its employment in pneumonia and, after all, its use is practical rather than theoretical, empirical rather than scientific. Wood believes it simply a valuable alterative, stimulant, expectorant, which may do good by checking intestinal fermentation and improving digestion.

Advantages of Creosotal over Allied Remedies—Since creosotal is identical in action with creosote, guaiacol, carbolic acid, etc., why should it be used in preference to these remedies? Because it possesses the distinct and positive advantages over them of being non-toxic, of lacking a burning taste, of having no unpleasant after effects on stomach and intestines, and of being

capable of administration in larger and more effective doses. Further than this, the foregoing qualities admirably fit it for use in children whose delicate organisms frequently reject many potent and desirable remedies.

Its Therapeutic Application to the Treatment of Acute Lobar Pneumonia—Text books on therapeutics make either no reference or very scant reference, to the use of creosote in pneumonia. Dr. Andrew Smith of New York, in his article on this subject says: "Creosote has been found useful by several observers and deserves further trial." Most of the flattering opinions concerning this remedy come from foreign sources, and notably from the French.

Chaumier of France, is the pioneer in this work; Von Leyden in Germany, and Louis Fischer in America, have made valuable contributions to the literature of the subject. Like many of my brother doctors, I have been dissatisfied with the expectant, negative treatment of pneumonia, and would gladly welcome a specific; unfortunately we have none. But we have in creosotal a valuable adjunct and adjuvant to the ordinary treatment of the dread disease. My own experience with the remedy is limited to six cases which occurred last winter. These cases were all of average severity, with the usual complications, and with temperatures ranging from 102.5—105 F. The diagnosis in each case was confirmed by competent consulting physicians, and the usual physical signs were elicited.

After a preliminary 10 gr. dose of calomel, creosotal was administered in

drachm dose night and morning and the elixir of nitroglycerin (P. D. & Co.) was exhibited *pro re nata*. The speedy and positive results were the diminution of the temperature without corresponding cardiac depression, a liquefaction of the exudate so that expectoration was facilitated, relief from previously existing pleuritic pain, and the stimulation of all the emunctories. In no case was there a crisis, but recovery took place by gradual defervescence or lysis. In one case tepid water was used as an antipyretic. The duration of the disease was from four days to two weeks.

Administration.—Creosotal is usually administered in doses of one-half to one drachm in hot milk night and morning. The preparation usually specified is that of Von Heyden. The

dosage for children is in proportion to age.

In concluding my remarks let me say that I am fully cognizant of the fact that the use of a remedy in half a dozen cases is not an extended trial, and is open to the usual classic objection: "That pneumonia gets well in spite of treatment and uninfluenced by treatment." But the positive results in lowering temperature without depressing the heart, the promotion of the liquefaction of the exudate, the maintenance of a mild intestinal antiseptis, and the substitution of lysis for crisis, commend creosotal to the conservative and progressive element of the profession. It has not been my intention to evoke discussion on that much abused subject of pneumonia, but simply to direct your attention to a drug which may perhaps prove useful in combating this disease.

Some Pathological Conditions Characterized by the Presence of the Yeast Fungus

By CLINTON G. HICKEY, M. D., DENVER, COLO.

The past quarter century has marked a long stride in medical science, and perhaps in nothing is this more emphatically true than in the line of increased exactness in diagnosis. To this development no single agency has contributed more than bacteriologic investigation and experimentation. Clinical conditions somewhat divergent but still supposed to belong to the same pathologic state have been shown to

proceed from causes quite apart the one from the other, and to be in reality entirely separate diseases; on the other hand in conditions with markedly differing clinical manifestations an identity in origin has been established beyond question. Also bacteria classed always formerly as non-pathogenic has been found under certain conditions and in some forms to manifest a pathogenic character of so much virulence as to

lead to a fatal termination in some reported cases.

This is asserted of a class so innocent heretofore of any suspicion of pathogenic power that one hesitates without abundant proof to give it credence, and yet evidence is accumulating from many sources to prove that several members of the *Saccharomyces* either have or may acquire under given conditions a pathogenic character.

It is of course a familiar fact that the *oidium albicans* or thrush fungus, belonging to this class, produces certain superficial lesions upon the mucosa of the alimentary canal; it does also occasionally invade the entire organism, causing a fatal disease. In the *Presse Med.*, August 24, 1898, occurs an article by H. Roger describing lesions produced artificially by inoculation of rabbits with the *oidium*, in which the granulations set up invaded the entire organism and caused hypertrophy of the kidneys, etc. It is, however, of another member of the *Saccharomyces* that I wish chiefly to speak.

That the blastomyces or yeast fungus may be pathogenic has not been generally recognized, but in some quarters such a belief has now gained a secure footing. Busse, whose name has been intimately associated with experimental work in connection with the yeast fungus, states in the *Berliner Medicinische Wochenschrift*, July 21 1898, that its pathogenic character has been known to us since 1894, he himself having reported a case of what appeared to be chronic pyæmia, starting as an abscess in the tibia and caused by a *saccharomyces*, which produced simi-

lar lesions experimentally. Curtis in France, has reported a case of myosarcoma of the thigh containing a yeast fungus.

It is well known to most of you, doubtless, that for a period of several years, and especially since 1894, a persistent attempt has been made by some Italian and German, and to a limited extent also by Russian, French and English pathologists to establish the identity of the blastomycetes with the cell-inclusions in carcinoma and sarcoma, thus making them the etiologic agents in these malignant tumors. The reports of their investigations have been published at length in the various foreign journals. Kahane in Vienna, as reported in the *Year-Book of Medicine and Surgery* for 1897, "was one of the earliest to describe the presence of blastomycetes in malignant tumors, and he states in his last communication that the blastomycetes which he has constantly found in malignant growths is nothing more than common yeast."

Sanfelice made inoculations into guinea pigs of a yeast which he named *Saccharomyces ellipsoideus neoformans*. Those receiving inoculations into the subcutaneous tissues died, on an average, in 30 days with local swelling at the point of inoculation, enlarged lymphatic glands in groin and axilla, and, on autopsy, nodules in spleen and kidneys with slight lesions in lungs and liver. The nodules mentioned contained masses of blastomycetes. Histological changes are carefully noted but I do not go into this, since my purpose is but to show that the pathogenic character of some of the

yeasts is established. The editor of the *Year-Book*, commenting upon the work of Sanfelice, which is extensive, doubts his conclusions as to the etiology of tumors but says "that some of the yeasts are pathogenic cannot longer be doubted." Mafucci and Sirleo, pathologists also of the Italian school, while differing from the deductions of their confreres, conclude that "there are some among the blastomycetes with pathogenic properties."

In May, 1894, three months before Busse's first report referred to above, Dr. T. C. Gilchrist exhibited before the American Dermatological Association in Washington microscopical sections from a case of skin disease clinically resembling skin tuberculosis. Certain parasitic bodies were found and described which after the first appearance of Busse's paper were recognized as blastomycetes. A complete description of the case was given in the Johns Hopkins Hospital Reports, pp. 1, 269 and 291.

In the bulletin of the Johns Hopkins Hospital, July, 1896, appeared a preliminary account of a second case which after further painstaking observations and inoculation experiments is made the subject of an extended paper by T. G. Gilchrist and W. R. Stokes in the *Journal of Experimental Medicine*, January, 1898, to which article is appended a lengthy bibliography. From this paper I quote portions of the summary there made: The case reported in this article is one of a somewhat extensive cutaneous disease, which occurred in a man, 33 years of age, who gave the following history: The disease first

made its appearance eleven and a half years ago, at the back of the left ear as a pimple which soon became pustular. The process extended forward very slowly and gradually encroached upon and covered almost the entire face, the central portion of which now presents an atrophic cicatricial condition. A second, third, fourth and fifth secondary lesion occurred on hand, scrotum, thigh and back of neck, lasting a varying time and then healed spontaneously. The disease when first examined presented many of the features of a lupus vulgaris. There were no enlarged lymphatic glands. The family and personal history revealed no syphilitic or tuberculous taint." Sections from the cutaneous lesions showed the presence of what appeared to be budding blastomycetes. Pure cultures of the organism were obtained directly from the cutaneous lesions in two places. Dogs, a sheep and guinea pigs were successfully inoculated, the most striking results being nodules, grossly simulating tumors, in the lungs. Microscopically these nodules were of a chronic inflammatory nature and contained numerous parasites identical in appearance with those in the patient." In conformity with prevailing nomenclature and for reasons assigned in this article, the parasites were considered blastomycetes or yeast fungi, and the disease was named "Blastomycetic Dermatitis."

In the *New York Medical Journal*, March 26, 1898, H. G. Wells describes at length a third case from the clinic of Prof. Senn at Rush Medical College, which presented many of the same

clinical features as Gilchrist's and, studied by cultures and inoculations, was found to be identical with it.

In the June following, at the meeting of the A. M. Association in Denver, Dr. Robert Hessler of Indianapolis, presented a paper before the section in Cutaneous Medicine and Surgery, in which he detailed an additional case. The patient, a healthy man, received a slight cut while being shaved by a barber. The wound healed in a few days, followed by the development of an oval red papule, small in size, elevated, hard, freely movable, and which remained stationary for three months. It then became inflamed and was opened aseptically. Culture tubes were inoculated and some of the pus was also spread on cover glasses; no "pus-formers" were found but a few days later there appeared in the culture tubes growths which subsequently were determined to belong to the yeast family.

Succeeding this came a case of combined syphilis and Blastomycetic Dermatitis, reported by Hyde, Hektoen and Bevan in the *British Journal of Dermatology*, 1899, XI, also discussed later in the *Journal of Experimental Medicine*, volume IV, 1899, by Hektoen.

In the *Journal of Cutaneous and Genito-Urinary Diseases* for January, 1900, Drs. H. G. Anthony and Maximillian Herzog give the history of a case from the clinic of Prof. Henrotin which seemed to be also one of blastomycetic infection upon a syphilitic gumma. A point of added interest in this case was that the ulceration began with the incision of an abscess which

followed an attack of erysipelas 20 years previous.

The most recent case of which I find record is one related by Dr. A. W. Brayton of Indianapolis, in the *Indiana Medical Journal* for April, 1900; this, with several which I have not mentioned, making, I believe, the eleventh to be recorded by observers in this country of this disease named Blastomycetic Dermatitis. No observer has questioned in any of these cases that the infective agent is one of the yeast fungi.

These cases are of interest to the dermatologist and surgeon; to the general practitioner also, since they are likely to be brought first to his notice. They may become of interest to the student of internal medicine in view of the possibilities suggested by results of inoculation in animals, and of the addition to the list of another chronic infective disease of the pulmonary tissues.

Finally I wish to give a brief account of three cases not of skin infection, but of throat infection, in one of which at least, and probably in all, there were none of the ordinary pathogenic bacteria but *only* numerous yeast cells in nearly pure culture.

Case I. I was called Saturday, January 29, 1898, to see W. A. Y., whose family consisted of himself, wife and two children—Lena, aged 5, and Maude, aged 10. I obtained this history: Ten days previous the wife had suffered from sore throat which recovered with the use of domestic remedies in two days. Wednesday night, 12 o'clock, January 26, W. A. Y. awoke with sore throat, intense aching across

the back, chilliness with fever coming on rapidly. Saturday a. m. temperature was 101, pulse 84, some aching still and general bad feeling. The throat showed a dense exudate on the right tonsil, the deposit extending along the margin of the palate to a little distance beyond the uvula, being seen also on the left tonsil to a slight degree. The deposit was grayish in color, firm, not easily removable, leaving an irritable bleeding surface. The sublingual and submaxillary glands were moderately swollen. A provisional diagnosis of diphtheria was made and a culture taken at once. Treatment consisted mainly in the use of Tr. Ferri. Chl. with Hydrarg. Bichl. internally and a spray of diluted hydrogen dioxide and applications of Loeffler's solution locally. Recovery was gradual but the exudate seemed prone to return, some persisting for a week. The culture report was negative as to diphtheria.

Case II. Lena, aged 5 years, began to be ill on Monday, January 31, with vomiting, high fever and sore throat. When seen the following morning she had a temperature of 102.3-5, pulse 120. Inspection of the throat showed the left tonsil to be covered with a dense grayish exudate; there were some small discrete spots on the right tonsil. Both tonsils were reddened, the redness reaching upward to the arch of the palate on the left side. The exudate corresponded in every particular with the description already given of that in the father's throat. On the same day an eruption appeared, beginning upon the chest and spreading over the body and extremities until 48 hours later it ap-

peared more thickly upon the extremities than elsewhere. The rash was small, papular, mostly discrete, elevated and could be felt under the skin before it showed on the surface. On the second day of her illness there were mild convulsive seizures which recurred occasionally for a period of three days. The urine was scanty and examination showed a high specific gravity and abundant urates but neither albumen nor casts. The throat exudate increased to form a profuse curdy looking mass covering both tonsils and extending on the pillars of the fauces, along the margin of the soft palate following the uvula and down to the opposite side. The posterior pharyngeal wall was nearly covered; there was a deposit at one angle of the mouth where there had been a crack and also a small spot on the roof of the mouth. The throat was not painful. There was practically no glandular enlargement. The exudate showed a most persistent tendency under the treatment before mentioned to return, a little still remaining on the fifteenth day. A culture was made on the first day of her illness with a negative report as to diphtheria. A second culture two or three days later brought the same report. On inquiring concerning what was present, Dr. Wm. C. Mitchell, then serving as city bacteriologist, kindly gave me the following report: There were no Klebs-Loeffler bacilli, no streptococci, no staphylococci, but numerous yeast cells.

Case III. Maude, aged ten years, was attacked on the eighth or ninth day of her sister's illness with symptoms

similar but less severe in type. The eruption was the same in appearance but more numerous. Unfortunately no culture was made from the throat exudate but it was in every way identical in appearance with that in the throats of the father and sister. There was scarcely any glandular enlargement.

As moderately free desquamation occurred in the cases of the two children these will probably be considered cases of scarlatina with an atypical exanthem.

How shall the process in the throats be regarded? What was the infective agent in these cases? Answer will be made that we had to deal with an ordinary scarlatinous angina in two and a tonsillitis in the third.

Unfortunately not until six months later did I encounter literature suggest-

ing that some of the yeasts might be pathogenic, and I recognize that I am not in a position to be dogmatic. A few words, however, will serve to summarize. There were four cases of throat infection, one of which I did not see during its progress, two were accompanied by an exanthem and desquamation, two were not. With this exception, the three cases described, viewed from a clinical standpoint, were identical, affording ground for the probability, at least, that in the three cases the throat infection was due to the same microbic agent.

The one studied did not show any of the pathogenic bacteria found in either diphtheria, scarlet fever or other disease affecting the throat, but did show *only* yeast cells in abundance.

Which suggests the question—was the infective agent in these cases one of the pathogenic yeasts?

Variola, Small Pox.*

HISTORY, ETIOLOGY, PATHOLOGY, DIAGNOSIS AND TREATMENT, PROGNOSIS.

By W. W. WOODRING, M. D., MT. PLEASANT, UTAH.

Mr. President, and gentlemen of the Rocky Mountain Inter-State Medical Association:

It is with great temerity and forebodings that I attempt to read a paper

before this honorable body of my chosen profession, especially on a subject that, according to history, was talked of in China, Hindostan and in Egypt before the Christian Era. Again

*Read at the Rocky Mountain Interstate Medical Association, Butte, Mont., August 28, 1900.

we find that it was partially described A. D. 544 in Egypt, but it was left to Rhages, an Arabian physician, to give us our first accurate and scientific history of the dread plague. We find mere mention of it in the Jewish history, but we find it was well developed on the American continent soon after the discovery of the latter. It developed in the Spanish colonies of Cuba, San Domingo, evidently having been carried there from Europe, and we find its ravages in a most virulent form in Mexico as early as 1527. In fact the mortality averaged in Europe and North America, at this date, about 3,000 to the million population.

Now, if in this paper, I can demonstrate the fact of the progress made by modern science and research, and stimulate the younger members of our profession to further and more thorough investigation, in the interest of suffering humanity, I shall feel that my time spent has not been in vain. I may not be able, in this paper, to present a single new idea, yet if I can crystalize the best thought of others, in a condensed form, I may then be pardoned for threshing over old straw.

We find it is not confined to any station or walk in life; the king on his throne or the peasant in his hut; neither is it confined to civilization. Washington Irving has described very fully the ravages wrought among our North American Indians. Until Jenner made his great discovery we were prone to take as a matter of fact that the dread scourge would come every five or ten years, and would run its course, until its force was spent. But within the last

few years, and in fact only recently, has this disease, which has given the older practitioner so much trouble, been a matter of serious consideration to the practitioner of to-day. During our recent wars this pestilence has again asserted itself, with its old time malignancy. It cannot be gainsaid that vaccination has proven a blessing to humanity, and although Jenner, unacquainted with toxins and anti-toxines, gave to the world an idea and a theory which to-day is being investigated by our foremost bacteriologists and scientific students concerning the etiology of this disease, we still have nothing definite, like syphilis, which was formerly called great or large-pox. It is of bacterial origin.

The greatest difficulty presents itself in the correct diagnosis of the disease. Measles, scarlet fever, chicken-pox, and even typhoid fever, may be suspected in the early stages, when an epidemic is not yet prevalent. These may properly be eliminated by proper methods. A typical history might be shortly given at this point to refresh our memory. Incubation from ten to fifteen days. There are four stages. The first stage of invasion or prodromes, with chills and high temperature, ranging from 104 to 106 degrees, three to four days. Stage of eruption with a drop of temperature until about the ninth day. Stage of suppuration or pus fever, with remission of temperature from the ninth to the eleventh day. Stage of dessication or drying, and a disappearance of fever by lysis. The eruption appears at first as red spots, which gradually become papules and about the sixth day

are filled with an opaque or cloudy looking fluid. By about the eighth day vesicles have formed from these papules, and contain pus. They soon burst, discharging their contents, and from the eleventh day begin to dry. The eruption also affects the mouth and pharynx, and in severe cases, the eyes. There is great pain in the limbs and back. We find this clinical picture from our own experiences of four epidemics, in the past thirty years, and from Klemper on his work on Physical Diagnosis.

Much can be said regarding symptoms. They are many, and liable to mislead. Complications are frequent, and when present involve principally the nervous system. The pathology is identical with that of all septic or toxic fevers, varying only as regards malignancy of infection.

Treatment—This may be summed up as follows: First, stimulation and nutrition. Second, elimination of the poison. Third, absolute hygienic surroundings and caution against further infection.

By stimulation we endeavor to strengthen the patient, that he may withstand the extra drain on the system. This may be accomplished with whisky, strychnine, nitro-glycerine, etc. The diet should be albuminous, as milk, egg, broth, etc. Our second step, elimination, which will be accomplished by cathartics, diuretics, keeping the patient warm, so as to hasten the last stage, and when this is reached, carefully open each pustule and expel the pus. It is well to keep the patient bathed with some antiseptic

solution, in order to lessen, if possible, malignancy of the pus. To this end, solutions of carbolic acid, bichloride of mercury and formaline may be used, care being taken not to produce toxic condition from the use of the drugs. The fever may be combatted with tepid baths, and if the subject be a robust one, coal-tar products may be used to advantage and benefit. They also relieve the distressing headache, which I have found in every case treated.

Salol may be combined and given to the double advantage of antiseptic and analgesic. I find an invaluable remedy in opium and its salts. I prefer morphine hypodermically. I find it acts better than per os. The mineral acids, especially hydrochloric, combined with syrup of raspberries, are acceptable to the patient and I find it of benefit to quench thirst. I use aconite to a great extent in high fever. In the convalescence, great care must be exercised and exposure to cold rigorously guarded against. Serious complications may follow an oversight in this respect. It is well to keep the patient anointed with some soft oleaginous substance during the period of desquamation. I use carbolyzed vaseline. I regard the period of desquamation as the most dangerous period of contagion. During this stage I often use the following: Ichthyol, grains, 10; vaseline, oz. iii.

The question of aborting acute infectious fevers has been fully discussed from both sides. The enthusiast claims marvelous success in this line, while his more conservative brother says: "How do you know it was small-pox—if you aborted it?" Thus we have our

learned critics with an endless chain running in a circle, but to say that science since the days of Jenner has made material progress, we have only to compare the tables and notes with our brothers one hundred years ago. Then the death rate was 30 to 40 per cent.; now it is less than 5, and in Utah for the past year it has been scarcely 1 per cent. Our state board reports about four hundred well defined cases, with three deaths, and I am happy to say that the higher courts of our state have sustained the school boards in enforcing compulsory vaccination of all children attending public schools. It has been my lot to treat several cases of confluent small-pox within the last year, and when I have been pressed for a prognosis in any case, I have felt it proper to state that if the patient was previously strong and healthy, and followed carefully the treatment outlined in this paper, and God is willing, he or she would surely recover.

UTOPIA OF WOMEN.

(*New York Sun.*)

Colorado is one of the glories of the woman suffragists.

Possibly it may become a state in which male suffrage does not exist because there are no males left.

This too complete triumph of woman suffrage seems indicated by some statistics which are giving the Coloradoans pause and making them feel that they are only a remnant destined to be swept away by the superior sex.

There are more females than males in the state. The birth statistics are

distinctly unfavorable to the dethroned tyrant, Man. The disproportion is not actually great yet, but it is disheartening when the death statistics are looked at. In the first six months of 1900, 786 more males than females died. Not so many males born and more die!

Gloomy visions rise in the minds of the vanishing race of men in Colorado. What are all her treasures underneath the earth if her men go into it so quickly?

The men of Colorado are notably polite. They may not all believe in woman suffrage, but they are willing to give the woman suffragists a free field.

A manless state, a commonwealth of women, a female Utopia and paradise of stateswomen—this is something that a man may be willing to die for.

To be sure, there might be reservations where men could be preserved as specimens, a wonder and a show, as buffaloes are, and importation might be encouraged. But not all the inhabitants of other states are as urbane as those of Colorado.

After the gradual extinction of the present stock, men would be reluctant to settle in Colorado. The precept "Make way for the ladies" may be carried to excess. "Let Amazonia flourish, undisturbed of men," would be the sentiment of sagacious bosoms.

A wealthy young Englishman was cured of blindness on his wedding day, and the fact was thought to be of sufficient interest to warrant its being cabled across the water. Such cures are being effected every day in this country and nothing said about it.

THE COLORADO MEDICAL JOURNAL

AND WESTERN MEDICAL AND SURGICAL GAZETTE

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EDITORIAL

DIVISION OF FEES.

The subject of division of fees between the general practitioner and the specialist has seemingly spread contagion among medical periodicals. The JOURNAL has discussed this question in its editorial columns several months ago, but it will not be amiss to quote at length an editorial in the *Cleveland Journal of Medicine*, of the September issue:

The recent statements of Dr. Lanphear of St. Louis on the division of

fees between the family doctor and the consultant is of especial interest. The fact is that the general practitioner feels as though he were falling by the wayside, and a specialist springs up in a new line every week or two and makes a strong bid for the patients that he thinks belong to him. The specialist has come to stay, and the family doctor doesn't want to go, neither does he care to be relegated to the not too lucrative position of purveyor to specialists. The question is not one of calling consultations. This is a simple matter.

It is done often as a matter of self-protection by every physician, and as well in cases along his own line as in others. When he is in duty bound to hand over his patient bodily, and still more financially, then indeed he feels as if something were due him for his selfdenial. Dr. Lanphear says in part as follows:

"When an attorney in a county seat has a client in danger of the penitentiary whom he *might* defend successfully, but fears failure, and hence is in need of the best counsel, it is customary for him to seek some eminent lawyer of a great city and request his aid. In so doing does he approach the distinguished gentleman, and say: 'I have a client accused of———, who is able to pay \$3,000 for his acquittal; will you take the case with me for this sum—leave me the gratification of having done my professional duty?' By no means! He plainly states: 'My patron has \$3,000 to pay for his defense, are you willing to take \$2,000 of this to join me in securing justice for him?'

"Arrangements of this kind are made daily in every large city. Does anyone ever suggest that the country attorney has been guilty of a dishonorable act in thus securing his city brother to do the major part of the work for \$2,000, he retaining \$1,000 for his services? Would any doctor, sued for \$100,000, regard such a transaction as disgraceful, unethical, objectionable, if thereby he were saving this sum?

"But let the question be one of saving life instead of securing liberty or preventing financial loss—and how different it is!

"If a country practitioner have a pa-

tient affected with recurrent appendicitis (upon whom he might operate with success, but fears possible failure) with a prospective fee of \$600, must he, in order to be 'ethical' write to some city surgeon to come to his help, take all of the \$600 and leave him merely the satisfaction of a duty well performed, or at best the little sum of money he may receive for a few visits at starvation rates? 'Upon what meat doth this our Cæsar feed that he hath grown so great?'

"Why should not the country doctor plainly say to the specialist: 'I have a patient with appendicitis who is able to pay \$600. Will you operate for \$400 and allow me \$200 for the preparation and after treatment, etc.?' What would be wrong about this? Let Drs. Robert T. Morris of New York, and Burnside Foster of St. Paul, who so vigorously maintain that division of the fee is unethical under any and all circumstances, point out what injustice would thereby be done to (a) the patient, (b) the attending physician, or (c) the eminent surgeon. Why should we not learn a few things from the methods of our most noted lawyers, men who are above suspicion as to purity of motives? Have we not hitherto been too unmindful of the financial interests of ourselves and our professional brothers?

"I insist that the payment of a 'commission' for all business simply 'referred' to a specialist, or for mere consultation, is probably unethical—certainly demoralizing in tendency; but that division of the fee is perfectly honorable and right when the specialist and

the general practitioner jointly share the work and the responsibility."

The parallel drawn by Dr. Lanphear between lawyers' and doctors' methods as at present carried out is not an accurate one. When lawyers divide the fee, it is with the knowledge of the client. When a doctor is given a commission by the consultant, it is practically always a secret arrangement which both would be ashamed to let come to the patient's knowledge. Such a secret compact is on a par with the commission accepted by couriers and other men who are supposed to be otherwise paid for their services, and it is not at all like ordinary payments on commission in business transactions. No one could find fault either from the point of view of honesty or of professional ethics with a doctor who accepts a case and agrees to manage it for a definite sum of money, and that sum being paid to him he might remunerate a specialist for his services out of it. That puts the matter on an entirely different footing. Such arrangements if popularized would subject the honesty of the family doctor to a considerable strain, insofar as he would be tempted to obtain competitive bids among specialists, and might employ men on account of cheapness rather than of ability. This is not however a fatal objection, as the patient must put his life in the hands of his physician at any rate, and is dependent for his welfare on his success in choosing a man of honor as well as skill for his attendant.

The September number of *Pediatrics* comments editorially on this commercialism of medicine in the following:

"If we detect our cook taking a commission from the butcher, we are angry, but we argue: 'What else can be expected of a cook?' If we ask a friend to recommend a paper-hanger and subsequently find out that he has recommended one who returns him part of the profit, we can never again have implicit confidence in that friend. We are inclined to think that his judgment must have been biased in favor of that paper-hanger who would give the largest reward for the contract, without considering very fully what the character of the work might be. The one thing above all others that we must not dare to trifle with is the absolute confidence of our patients in our integrity. Think of what they would be compelled to think of us should they suspect us of this practice. They would certainly be justified in insisting upon making the choice of a consultant themselves—a thing which they are often incompetent to do. It has been stated that the family physician would lose in the end by taking his case to the man who would pay the largest stipend, because the latter would be likely to be a relatively incompetent man. Thus matters would regulate themselves. The practitioner would certainly endeavor for his own good to engage a fairly competent man; but this would only be a compromise with the devil, and would be endangering the life or health of the patient for the benefit of the family doctor's pocket. No physician who allows his greed to influence the choice of a consultant can do his full duty by his patient. A year or two ago the journals published an account

of a country doctor who arrived here with a half-dozen celiotomy cases, which he endeavored to farm out to the highest bidder. We were glad to note that he took his cases to another city. To the honor of the medical pro-

fession in New York City it can be said that this evil is not as prevalent here as in some other parts of the country; to the dishonor of certain of its members is due the fact that the custom prevails at all.

College Notes.

Work at the Denver College of Medicine seems to be progressing in a very thorough and satisfactory way. The number of students in attendance is larger than in previous years, the graduating class numbers twenty-two. The laboratories, under the efficient direction of professors Mitchell and Wilder, are in excellent condition. A large additional room is being fitted up as a pathological laboratory. The physiological laboratory will be removed to the rooms on the first floor formerly occupied by the department of pathology, leaving an abundance of additional space at the disposal of professor Mitchell for his work in bacteriology.

Professor Spivak has instituted a laboratory of clinical microscopy in the dispensary which attends to the examination of all specimens incident to the clinical work in the dispensary. This additional laboratory is of marked benefit to both the dispensary physicians and the students.

The clinical work in the dispensary is steadily increasing in amount and in importance. The amount of material is excellent. It is fully utilized by the students of the third and fourth year classes. Only those patients who are able to pay a physician are treated, and

the physicians of Denver are respectfully requested to refer to the dispensary such poor people as they may desire to have treated free.

On each week day at 10 o'clock in the morning the third and fourth year classes attend a practical clinic held by one of the professors or instructors of the school in the clinical lecture room adjoining the dispensary. These clinics are as follows:

Medicine—Mondays and alternate Thursdays.

Surgery—Tuesdays and alternate Fridays.

Eye and Ear—Wednesdays.

Nose and Throat Diseases—alternate Thursdays.

Nervous and Mental Diseases—alternate Fridays.

Gynecology—Saturdays.

In the department of anatomy Professor Childs and Dr. Dean are conducting a thorough and systematic course. Practical work in the dissecting room has begun, the supply of material being equal to the demand.

From all points of view the faculty of the Denver College of Medicine have reason to congratulate themselves on the present condition of the institution.

SOCIETY REPORTS

The Denver Clinical and Pathological Society.

THIS REPORT APPEARS IN NO OTHER MEDICAL JOURNAL.

The first regular meeting of the Denver Clinical and Pathological Society was held the evening of October 12, 1900, at the California building, the members being the guests of Drs. Fleming, Levy, Coover and Freeman. The president, Dr. Coover, being absent the first vice president, Dr. L. Freeman, presided.

The minutes of the last meeting were read and approved. The membership committee reported that there were no vacancies. There were no applications for membership.

The annual report of the secretary, Dr. Geo. E. Tyler, was read, as follows:

Number of meetings; 9.
Average attendance; 28 4-9.
Present membership; 40.
Gain or loss; none.
Number of visitors; 41.
Papers read; none.*
Cases presented; 6.
Cases reported; 135.
Specimens presented; 19.
New instruments shown; 4.
Number participating in discussions; 161.
Deaths; 1 (Dr. E. R. Axtell).
The proceedings are published in the COLORADO MEDICAL JOURNAL.

*No papers are ever read before the society.

On motion the report was accepted for the files.

The treasurer, Dr. C. B. VanZant, being unable to be present, rendered a verbal report that there was a balance of \$30 to the credit of the society.

The society then proceeded to the election of officers and committees, as follows:

President, Dr. W. A. Jayne.

First vice president, Dr. G. Melville Black.

Second vice president, Dr. T. J. Gallaher.

Secretary, Dr. F. W. Kenney.

Treasurer, Dr. C. B. VanZant.

Membership committee, Dr. L. Freeman, Dr. J. M. Blaine, Dr. F. W. Kenney.

Executive committee, Dr. F. E. Waxham, Dr. Edward Jackson.

Dr. Wilder exhibited specimens as follows:

1. Multiple metastatic sarcomata of the lung.
2. Aneurism of the arch of the aorta with perforation into the trachea.
3. Fibro-lipoma of the kidney with calculus.
4. Fibrosis of the aortic, mitral, and tricuspid valves. Discussed by

Drs. Tyler, L. Freeman, Lobingier, Hall and Jayne.

Dr. Lyman showed a specimen of necrosis of seven days duration. Discussed by Drs. Powers and Lobingier.

No instruments were shown.

Dr. Jackson reported a case of wood alcohol intoxication with total blindness for 48 hours.

Dr. Black reported a case of gunshot wound of the eye, a portion of the shell passing through the eye-ball and lodging in the orbit.

Dr. Edson reported a case of temporary intestinal obstruction in a child of five years caused by a wad of toilet-paper. Discussed by Dr. L. Freeman.

Dr. Bergtold reported a case of dilated heart with extensive atheroma and aortic murmur in a patient of 50, the heart on autopsy weighing thirty-seven ounces. Also enlarged kidneys and nutmeg liver.

Dr. Whitney reported an atypical case of typhoid fever with daily rigors followed by high temperature intermitting with a normal temperature. Discussed by Drs. Hall, Hershey, Tyler, Mann, Stover and Edson.

Dr. Taussig reported a case of acute gastric indigestion.

Dr. Hill discussed the action of beladonna in capillary bronchitis of children and old people. Discussed by Dr. Kleiner.

Dr. Wetherill further reported on his case of inspiration pneumonia after operation for pelvic abscess, it being followed by death. Also a case of supposed pulmonary tuberculosis without cough, with death resulting.

Dr. Perkins reported a case of appendicitis with general peritonitis, operation, recovery. Discussed by Dr. Warren.

Dr. Lyman reported a case of fracture of the external condyle of the humerus, with operation five weeks after the accident and partial restoration of the function of the arm. Discussed by Dr. Stover.

Dr. Tyler reported a case of typhoid with perforation operated on under local anesthetics 2 1-2 hours after the symptoms of perforation; death. Discussed by Drs. L. Freeman, Whitney, Powers, Lyman, Black, Levy, Warren.

Dr. Jayne reported a case of uterine hemorrhage with gangrené, thought to be specific in origin.

Members present, 32; visitors, 2, Dr. Wilder and Dr. English.

After a few remarks by Dr. Jayne, accepting the presidency, the society adjourned.

F. W. KENNEY, Secretary.

The following taken from the daily papers is an interesting example of newspaper pathology:

Wabash, Ind., Nov. 3.—William Fountain, aged 25, son of the janitor of the Wabash High School building, is dead here, after a week's illness, the result of cigarette poisoning. Young Fountain had been using cigarettes to excess for several years and the doctors say his system was saturated with nicotine. He had several internal hemorrhages and his physicians say that the remedies administered, owing to the condition of his blood, had no effect.

EXCHANGES

Removal of Cervical Sympa- thetic Ganglia.

Geogiewsky "has conducted some experiments which tend to prove that the symptoms of exophthalmic goitre are due to the hypersecretion from the thyroid gland. Dogs and rabbits were fed with preparations of thyroid, and there followed symptoms which closely resembled those of Graves' disease—*i. e.*, tachycardia, increased respiration, polydipsia, glycosuria, and later general depression and disturbances of the digestive organs and of the nervous system, which latter were more marked in young animals than in old ones. When the administration of thyroid was stopped the animals recovered, unless the nervous symptoms were too far developed. In none of these cases were either exophthalmos or goitre produced."

Notthaft records an interesting case, "in which a man took for obesity nearly 1,000 five-grain tablets of thyroid extract within five weeks. After the first three weeks he began rapidly to develop the symptoms of acute Graves' disease, with all the characteristic signs." When the thyroid extract was stopped and the patient put upon arsenic all the symptoms disappeared quickly, except the eye changes and the goitre, which were still notable for about six months. The headache and pains which are so common in thyroid poisoning, were absent, and all the symptoms of exophthalmic goitre were

present, so that Notthaft believes that it was actual acute Graves' disease. He expresses the conviction that this disease is due to qualitative changes in the thyroid secretion, and thinks the occasional good effects from the use of thyroid gland may be due to the fact that the patient is unable to secrete the proper quantity of normal product of the gland, and does secrete a product which is abnormal, and which causes poisoning. After a very elaborate study of the literature, the author insists that the only theory of causation of the disease that is justified is that it is due to changes in the thyroid gland.

Berard has observed fever in 60 per cent of cases of partial thyroidectomy; in 70 per cent after exthyreopexy, and in 80 per cent after the whole gland was removed. The remarkable fact about this fever is that there are no associated symptoms, excepting perhaps, flashes of heat, some excitement and excessive sweating. The skin may show hyperemia from vasomotor changes, but the tongue remains normal; the alimentary tract rarely shows abnormalities, though when the fever is disappearing diarrhea may be experienced; and there are no changes in the heart and lungs. There is, therefore, no infection in these cases, and they do not correspond to an acute myxedema. Berard has noticed that the amount of laceration of the glandular tissue which is caused by the operation is proportionate to the occurrence and degree of the following

fever, and some persons will acquire fever by taking thyroid extract or iodothyryn, so that the fever seems due to an excessive amount of thyroid secretion, set free by the trauma, or perhaps by the irritation of the operation.

There are a number of theories concerning the exact seat of the disease. It is claimed by some that it is due to disturbed innervation; others think that the disease must be due to diseases of the medulla oblongata; others that it is an affection of the sympathetic nerves, or that it is a disease of the central nervous system, associated with chronic intoxication. There can be no doubt but that the sympathetic nervous system plays an important role in the production of this disease; whether the part taken by the sympathetic is primary or secondary is not known. However, it is most likely secondary, as this system of nerves controls involuntary actions, and controls the trophic influences of many organs of the body.

The excessive production of thyroid secretion cannot be questioned, but the point is, what induces this excessive secretion? Is it deficient action of the nerves which preside over this gland and inhibit its action? Whether this be true or not, the removal of the cervical sympathetic ganglia is certainly productive of most wonderful results. The following report concerning the removal of the cervical sympathetics is interesting and almost conclusive in this connection:

"Faure, of Paris, excised the cervical sympathetics three times with one death, and advised bilateral removal, with a delay of a few days between the

operations. Jennesco reported three cases of simple section of the sympathetic, all successful; partial resection twelve times, with eleven cured and one unrelieved; an entire bilateral resection twice, with good results."

The writer operated on the 7th of April, 1900, upon a colored woman 29 years of age, removing the three cervical sympathetic ganglia on the right side. This was a most typical case, and had existed two years, receiving the ordinary treatment at the hands of different physicians. Her temperature preceding the operation was 101, the average pulse rate 140. The temperature and pulse records show that after the operation her temperature went down below 100, and the third day after the operation the pulse rate fluctuated, being 110 on April 19, when she was discharged from the hospital, and that the temperature was normal, with the exception of two or three days, when it was up a degree or two, as a result of irritation of the wound. There was no suppuration whatever in connection with this operation; all the unpleasant symptoms gradually decreased; there was a decided improvement in the exophthalmos, the eyes receding very perceptibly, the excessive nervousness disappeared almost entirely, her sleep became peaceful, and there has been a decided increase in her bodily weight—a very great contrast to her restless condition preceding the operation.

The next meeting of the Western Surgical and Gynecological Association will be held in Minneapolis, Minn., December 27-28, 1900.

Gasoline as a Surgical Dress- ing.

The *Canadian Practitioner and Review* records the novel use of gasoline as a surgical dressing. Dr. Riordan has been using gasoline for the last four years in cleansing the field of operation, in cleansing traumatic wounds, and in the subsequent dressings of all classes of wounds—not using water or other lotions or solutions—and can now recommend a trial of this common detergent in ordinary surgical work. He was led to use gasoline first for the purpose of cleansing from injured parts what railway employes call black oil. We all know how black and grimy are the hands of railway employes engaged in shop work and about locomotives. While working in their ordinary occupations an accident occurs—fingers are crushed, for instance. The injured person comes under the surgeon's care. The surgeon's first duty is to see that the injured parts and the surrounding tissues are thoroughly and surgically deterged or made surgically clean. Soap and warm water with a brush has been the usual means employed, also ether, alcohol, etc. He found the process to be slow, painful, and not always thorough, as we understand surgical cleanliness, and the idea of using gasoline as a detergent readily suggested itself, as this substance has been used for years to cleanse grease stains from clothing, gloves, etc. He finds that it does not irritate fresh wounds or granulating surfaces any more than water does. It is best applied by taking an ordinary wipe, made of cotton batting

or sterilized gauze, and wiping the parts which it is desired to cleanse. The gasoline immediately evaporates and leaves the surface dry and perfectly free from grease. This will be found an advantage where sectional strapping by adhesive plasters is to be used, as the plaster adheres much more firmly when the skin is free from any oily substance.

Digestibility of Breadstuffs.

In the September number of the *Pacific Medical Journal*, Dr. Alfred Perry tabulates the digestibility of various breadstuffs.

As bread must constitute the bulk of the food of sick and well persons, it would be useful to determine the best conditions for the digestion of bread, both in healthy and disordered digestion.

The conversion of starch being partly effected by the saliva, the greater quantity of the saliva mixed with it, and the more intimate the mixture, while retaining its alkaline reaction, so much the more perfect the conversion of starch into dextrine and maltose. In eating breads (all baked flour foods) we chew them until they are sufficiently moistened to form a soft paste, which is easily swallowed. The amount of saliva to form a soft paste depends entirely on the amount of moisture contained in the bread.

AMOUNT OF WATER CONTAINED IN BREADS.

<i>Water Contained</i>		
<i>Parts.</i>	<i>Kinds of Bread.</i>	<i>Parts.</i>
100	Army Crackers.....	10
100	Soda Crackers	15

100	Bakers' Toast.....	18
100	Pie Crust	14
100	Small Hard Rolls.....	31
100	Small Soft Rolls.....	40
100	Soft (Milk) Bread.....	39
100	Soft (Milk) Bread, stale.	30
100	French Bread	35

In foods containing much fat, like pie crust, fried bread, meats and fish fried in batter, the conversion of starch is very small, and is not in proportion to their dryness; it depends upon the fact that each particle of starch is coated with fat, which hinders the direct contact with the saliva in the stomach. I find that pie-crust with 50 per cent saliva has 52 per cent of its starch converted into maltose and dextrine. Pie crust deprived of fat by ether mixed with 50 per cent of saliva, has 78 per cent of its starch converted.

The hard-tack of the army was considered by Salisbury, in extensive researches made on the subject in 1865, to be the cause of indigestion and the resulting prevalent camp diarrhea; although it is very dry, containing only 10 per cent of water, yet it is hard and tough, and not easily penetrated by the saliva. The law which I formulate and hope to have established is, that the digestibility of breads (including all baked flour foods) is in proportion to the amount of saliva which they absorb during mastication. It is also in proportion to the amount of starch which is converted into dextrine by the heat of baking, which varies from 4 to 30 per cent.

Although it is true that the heat of baking bread is insufficient to kill the

spores of most bacteria, and also the pathogenic bacteria themselves, yet it does kill those bacteria which have been thought to have either a causal or aggravating action on stomach disorders, namely, the bacteria of alcoholic, lactic, acetic and butyric fermentations, and also the sarcinæ. In Walsh and Waldo's experiments they found none of these bacteria. The eleven varieties they found were: Hay bacilli, 4 kinds; sarcina, 2 kinds; 4 bacilli, named A. B. C. D; bacillus figurans; 1 staphylococcus; micrococcus, A. The loaves in which these were found were large 4-pound loaves, to the center of which the heat reaches very imperfectly.

None of these were pathogenic, and the only one which had any connection with gastric disease was sarcina. Whether this relation is causal or sequential is doubtful. The bacteria which are supposed either to cause or to aggravate existing gastric disease, viz.: the bacteria of alcoholic, acetic, lactic and butyric fermentation were not found at all. Indeed, it is not likely they would be, for they are killed at the low temperature found in the center of the loaves of bread (163 degrees F.) during the baking. George Newman says that a temperature of 158 degrees F. kills the sour fermentation bacteria.

My experiments give the following results. The samples of bread were taken from the interior of the loaves or rolls placed in sterile water and kept at 100 degrees F. for three days in sterilized test tubes.

Army Crackers—remained sterile.

French Bread (1-lb. loaves)—remained sterile.

Soft Milk Bread (1-lb. loaves)—remained sterile.

Baker's Toast—remained sterile.

Hard Rolls (3-oz.)—remained sterile.

This is to be expected, as "a heat of 160 degrees F. is enough to kill the sour fermentation bacteria."—George Newman.

Under these findings there is no reason for ascribing gastric disorders (fermentations) to the presence of living bacteria in bread, for the heat of baking loaves of less than 2-pound weight is enough (203 degrees F.) to kill all gastric fermentation bacteria which might have been in the materials used. Those found in the London examinations of Walsh were other innocent species, and these were found only in 4-pound loaves. Dryness of bread with porosity, on which depends the amount of saliva which is absorbed in chewing, are the main factors in determining the digestibility of bread. If bread which is dry and porous is soaked in liquids before eating, or in the mouth while eating, its character of easy digestibility is taken away.

Telephone
Aphonia. Dr. Clarence C. Rice reviews in the *New York Medical Journal* of September 10 the effects of the telephone on the nervous system. "Were These Unusual Cases of Partial Paralysis of the Vocal Bands Caused by Over-use of the Telephone?"

The two reasons for the selection of this subject are to call to your attention

a somewhat novel cause of vocal disability, and to ascertain if other members of this association have noted injurious effects upon the vocal apparatus from a faulty use of the telephone. The two patients whose cases I shall present for your consideration have given so clear a history of the cause of their vocal trouble that I can have but little doubt that their dysphonia was occasioned both by a foolish manner of using the telephone and by its over-use. It is not hard to believe that the nervous strain which some people seem to undergo when employing the telephone constantly, can easily have a most injurious effect, not only on the general nervous system, but on the hearing as well. It would be interesting to learn from aurists whether injury to the auditory nerves has been frequently noted in this connection. We all hear of and see persons who allow themselves to become nervously excited and exhausted when using the telephone, and such strain would be likely after a time to produce some degree of exhaustion of the auditory nerves and possibly of the recurrent nerves, by reason of central irritation. It does not seem amiss to note the large possibility that an incessant use of the telephone, harassed as the operator in large towns must frequently be by frequent interruptions, by failures to transmit the desired message, or by poor service, is an additional cause in the production of "American neurasthenia." The family physician, I learn, often has occasion to advise nervous patients not to use the telephone at all, and I know several instances in which men have finally, by reason

of increasing nervousness, delegated their telephone work to other people. Although we have no special data on the subject, because they are very difficult to obtain, we should believe that the nervous strain, particularly upon the women who are employed at central offices, would be very great. This general nervous exhaustion, as I have said, may account for the impaired power of the vocal muscles through the medium of central causes, although a dysphonia due to over-use of the voice would be more likely to be peripheral in its origin.

Both my patients were men, one about forty-five and the other about fifty-five years of age. Both were actively engaged in business, one in life insurance, and in constant communication with people in town and out of town through the medium of the telephone; the other, the local manager of a realty company, told me that he used the telephone from morning until night. This latter patient was under weight, and so nervous that his physician had ordered him to take a long vacation, which, for business reasons, he had not felt that he was able to do. The older patient, on the contrary, was over-stout, in fair general condition, and had all the enthusiasm which seems to go with the life insurance business. Both these patients came to the office about the same time during the past winter, and the questions at their first visit developed the interesting fact that they both felt that the persistence of their partial loss of voice had principally been occasioned by the over-use of the telephone. Both had been in the habit of using a trans-

mitter which rested upon the desk, and bending the chin well down on the chest, a position which makes the neck rigid and must interfere somewhat with the nerve and blood supply of the upper respiratory tract. Of course this position in using the telephone was not necessary, and harm would have been much less likely if the operator had used the telephone when standing, or had held the head in such a position that the neck had not been compressed. The laryngeal lesions in the two patients were quite different. In the case of the thin, nervous man, the vocal bands, while showing sufficient power to approximate in a general way, had lost their ability to straighten out and come in contact with each other throughout three-quarters of their entire length. The thyreo-arytænoid muscles were evidently completely fatigued. In addition to this lack of straightening power, the large lateral muscles evinced great lack of sustaining power, for, unless the patient made special efforts, the arytænoid cartilages fell apart directly after they had met. During the utterance of any sound the vocal bands trembled as any tired muscle would do. This condition clearly demonstrated partial loss of power of the lateral adductors and almost entire inability of the thyreo-arytænoid, or straightening, muscles. The voice was very uneven. For a moment it was almost natural, but he would quickly become hoarse or voiceless. He was sometimes able to speak with fair clearness by pitching his voice considerably lower than in his ordinary conversational tone. His hoarseness had been present for nearly two months.

No other cause than the bad manner of using the telephone, or its over-use, could be found to explain this vocal disability. The muscular weakness was bilateral. There was very little if any catarrhal change in the laryngeal cavity. This patient had never been a singer or public speaker, and had not used his voice in a trying way, except in the way I have indicated.

The peculiar feature of the partial paralysis in the two cases which I have presented were in the first case the long continuance of that form of vocal disability which usually remains but a few days after severe muscular strain. We have seen it frequently in shouting students, campaign speakers and outdoor singers, but the fatigue usually quickly repairs itself. In my first patient the muscular strain had been so severe and so long-continued that it is a question whether a perfect recovery will ever be effected. The immediate falling apart of the arytenoid cartilages at the second of contact is not usually noticed except in severe cases of strain, and the trembling of the vocal bands is a rare feature.

In the second case the sluggish movement of the right vocal band was similar to that seen in cases of partial ankylosis of the arytenoid cartilage. But here the arytenoid was normal. Apparently the frequent and severe compression of the neck on the right side had been sufficient to cause a chronic passive congestion, with some degree of thickening of tissue, which explained the lack of power and the vocal disorder on the right side.

If we believe that the faulty use of the telephone or its over-use is compe-

tent to produce the laryngeal affections described in this paper, it is easy to prevent them by warning patients not to become nervously exhausted by using the telephone too much, and not to employ it in such a manner as to injure the vocal nerves and muscles.

HURRAH FOR EAU CLAIRE!!!

EAU CLAIRE, Wis., Nov. 10.—The new method of anesthesia for operations below the diaphragm, consisting of injection of cocaine into the lumbar portion of the spinal column, being a substitution for general aesthesia, leaving the patient fully conscious, minimizing the shock, and leaving no injurious after effects, has been successfully used here in the last two weeks for six delicate operations by a leading physician. This method was not used in the United States prior to August 19 last, and has been used nowhere in the Northwest except in Eau Claire and in Chicago, where it was accomplished by Dr. Murphy.—*Denver Evening Post*.

INTERESTING COINCIDENCES, IF TRUE.

According to the *Chicago Chronicle*, Walter J. and Howard E. Swanson, twin brothers, of Breeden, W. Va., married Dorothy and Parthenia Freeman, twin sisters, less than a year ago. October 16, Mrs. Walter Swanson gave birth to triplets (girls) and an hour later Mrs. Howard Swanson produced boy triplets. Query: Will these marry triplets in the course of time, and if so?

NEWS ITEMS

The Globeville schools were closed October 22 on account of an outbreak of diphtheria.

Scarlet fever and small-pox in some of the schools have caused the Denver health authorities much anxiety.

The next meeting of the Western Surgical and Gynecological Association will be held in Minneapolis, Minn., December 27-28, 1900.

Dr. Leonard Freeman of Denver, Colo., delivered an address at the banquet tendered Dr. Christian Fenger, the distinguished Chicago surgeon, on the occasion of his sixtieth birthday, Saturday, November 3.

Bubonic plague is reported at Montevideo. The British steamer, Highland Prince, from Antwerp, touching at London and Bahia, arrived there October 14. Five deaths, including the captain and first officer, occurred during the voyage.

The quarantine instituted by the Colorado State Board of Health against the Japanese of San Francisco has been raised. They can enter the state if they can show that they have not been exposed to the plague for at least six weeks before coming.

Cheyenne, Wyo., has been having an epidemic of typhoid fever. Dr. W. C.

Mitchell of Denver, Colo., has been investigating the water system, dairies and general sanitary condition of the city for the purpose of determining the origin of the infection.

DENVER HEALTH REPORT.

Death Record.—There were 184 deaths in the city during October, according to the monthly report of the health commissioner. Of this number 99 were males and 85 females. In October a year ago there were 178 deaths. There were 51 deaths from tuberculosis, of which 41 were contracted outside of the state, 4 in Colorado and 6 not stated. The death rate, excluding tuberculosis contracted elsewhere, was 12.36. The principal causes of deaths were: Typhoid fever, 10; heart disease, 13; pneumonia, 10; intestinal obstruction, 6, and peritonitis, 11.

HOSPITAL CORPS REORGANIZATION.

The Hospital Corps of the Colorado National Guard, which has lain dormant since the Colorado boys went to Manila, has been stimulated into activity. There were 18 enlistments, chiefly medical students. The officers are as follows: Surgeon general, Dr. W. W. Grant; major, Dr. C. K. Fleming; captain, Dr. Aubrey H. Williams; lieutenant, Dr. D. D. Thornton. The first drill in marching tactics was held October 22.

REGULATING THE HEALTH OF THE PUBLIC SCHOOLS.

Health Commissioner Carlin for some time past has been collecting statistics relative to the work of health inspectors for public schools in the hope of inducing the Denver City Council to adopt a new system in Denver.

Chicago has 50 inspectors for 300 schools, who receive \$50 a month during the school year. All children who have been absent from school four days or more are examined by the inspectors, and cannot return to school without a permit. During a period of 25 days 9,770 children were examined and 694 were found suffering from contagious diseases, enough to start a serious epidemic.

In New York, where a similar system prevails, daily inspections are made of all schools between 8:30 and 9:30 in the morning. Inspectors there receive \$30 per month and have charge of two schools each.

In Philadelphia 300 physicians appointed by the school board make daily inspections without pay. The extent of epidemics of children's diseases has been greatly diminished there.

Dr. Carlin has also taken up the subject of proper ventilation in business houses and proposes to secure for men, women and children who must work the allotted breathing space.

Hygienic laws fix 700 cubic feet as the minimum air space for an individual, and the city ordinance governing health conditions follows this standard, which means a space the equivalent of a room

nine feet square and nine feet high shall be set aside for each worker indoors.

That little or no concern is manifested by many employers for the health of the workers they employ is well known by health officials, and two physicians connected with the health department have begun a systematic investigation of the business houses of the city to learn in what cases the city ordinance governing employes is being violated.

The Visiting Nurses' Association of Denver held its annual meeting November 8, at the Y. M. C. A. The following new directors were elected: Mesdames George Gano, Charles Denison, J. H. Robin, D. C. Beaman, W. A. L. Cooper, Fred Butler, Robert Rubridge, Dr. Conley and Dr. Alice Jeffrey. The expenses of the society have been \$900 for the past year and \$300 is in the treasury. Two nurses have been kept in the field, Mrs. Everson and Miss McAfee, who have nursed the sick in their homes, when they were too poor to employ proper care, and when, for various reasons, like the presence of small children in the family, it was impracticable to send the mother to the hospital. The patients have been almost entirely women.

Over 16,000 bouquets have been distributed in the hospitals. Mrs. Butler paid a glowing tribute to the generosity of the Denver florists, saying that no other flower mission in the country is furnished with flowers for its work free of charge by the florists.

At the time of writing, Miss Jennie Farley, at the head of the Training

School for Nurses at St. Joseph's Hospital, in Denver, is dangerously ill with appendicitis.

The commencement exercises of the St. Luke's Hospital Training School for Nurses were held at St. John's cathedral, Denver, October 18.

The graduates were Josephine Schubert, Anna Ness, Mary Brooks Eyre, Nellie Carr, Nora Christianson, Mrs. C. Corthell, Ida Wells, Gustav Johnson. The cathedral was well filled. After the opening prayer the main address was delivered by Rev. F. F. Kramer, on the "Noble Calling." He showed that side by side with the hospital development came the medical profession, and later than that the nurse, the aid to both. The address to the class was given by Dr. Edmund Rogers. Bishop Spalding presented the diplomas for the two years' course at the hospital.

An informal reception was tendered the graduates and friends by the Hospital Ladies' Aid Society, of which Mrs. J. F. Spalding is president, in the Nurses' Home, Twentieth and Lincoln avenue. A levy of the nurses in charge of Miss S. L. Rutley, principal of the training school, were also in attendance.

COLORADO STATE BOARD OF HEALTH.

November 1, 1900.

The following is a report of the small pox cases recorded at this office for the month ending October 31, 1900:

Aguilar, Las Animas county, 4 cases, September 28 to October 2.

Denver, Arapahoe county, 17 cases, September 17 to October 25.

DeBeque, Mesa county, 10 cases, July and August.

Erie, Weld county, 1 case, September 30.

Elbert, Elbert county, 1 case, October 19.

Greeley, Weld county, 1 case, September 3.

Hooper, Costilla county, 1 case, October 15.

Idaho Springs, Clear Creek county, 1 case, October 8.

Monte Vista, Rio Grande county, 1 case, October 14.

Ouray, Ouray county, 9 cases, October 9 to 29.

Pueblo, Pueblo county, 13 cases, October 1 to 24.

Querida, Custer county, 1 case, October 5.

Rocky Ford, Otero county, 2 cases, September 6 to 18.

Rio Grande county, 4 cases, September 25 to October 5.

Saguache, Saguache county, 1 case, October 14.

Sneffels, Ouray county, 6 cases, October 10 to 16.

Trinidad, Las Animas county, 1 case, September 29.

Walsenburg, Huerfano county, 1 case, October 22.

Total for the state for the month, 75 cases.

No deaths.

G. E. TYLER,
Secretary.

ST. LUKE'S HOSPITAL MANAGERS.

The annual meeting of the St. Luke's Hospital corporation, October 22, resulted in the selection of the following board of managers: L. E. Campbell, F. W. Crocker, W. B. Page, E. A. Peters, G. E. Ross-Lewin, F. W. Standart and John W. Walker.

THE WHITE DEATH.

(*American Magazine.*)

"Of all the natural phenomena peculiar to the Rocky mountain region, none is more strange or terrible than the mysterious storm known to the Indians as "The White Death." Scientific men have never yet had an opportunity of investigating it, because it comes at the most unexpected times and may keep away from a certain locality for years. Well-read men who have been through it say that it is really a frozen fog. But where the fog comes from is more than any one can say. This phenomenon occurs more frequently in the northern part of Colorado, in Wyoming, and occasionally in Montana.

"About two years ago a party of three women and two men were crossing North Park in a wagon in the month of February. The air was bitterly cold, but dry as a bone and motionless. The sun shone with almost startling brilliancy. As the five people drove along over the crisp snow they did not experience the least cold, but really felt most comfortable, and rather enjoyed the trip. Mountain peaks fifty miles away could be seen as distinctly as the pine trees by the roadside.

"Suddenly one of the women put her hand up to her face and remarked that something had stung her. Then other members of the party did the same thing, although not a sign of an insect could be seen. All marveled greatly at this. A moment later they noticed that the distant mountains were disappearing behind a cloud of mist. Mist in Colorado in February! Surely there must be some mistake. But there was no mistake, because within ten minutes a gentle wind began to blow and the air became filled with fine particles of something that scintillated like diamond dust in the sunshine. Still the people drove on until they came to a cabin where a man signaled to them to stop. With his head tied up in a bundle of mufflers he rushed out and handed the driver a piece of paper on which was written: 'Come into the house quick, or the storm will kill all of you. Don't talk outside here!'

"Of course no time was lost in getting under the cover and putting the horses in the stable. But they were a little late, for in less than an hour the whole party were sick with violent coughs and fever. Before the next morning one of the women died with all the symptoms of pneumonia. The others were violently ill of it, but managed to pull through after long sickness.

"'I seen you people driving along the road long before you got to my house, and I knowed you didn't know what you were drivin' through,' said the man, as soon as the surviving members of the party were able to talk. 'That stuff ye seen in the air is small

pieces of ice, froze so cold it goes clear down into your lungs without melting. If any man stayed out a few hours without his head covered up he would be sure to die. One winter about eight years ago it cleaned out a whole Indian tribe across the Wyoming line. They are more afraid of it than they are of rattlesnakes. That's the reason they call it the "white death." "

WASHING HIM AWAY.

The other day an amature nurse in South Africa went up to a doctor and asked him what she must do.

"You should have learned that before you came here," the doctor replied. "Do anything that wants doing."

The nurse went up to a handsome but wounded Highlander, and said:

"Will you let me wash your face?"

The soldier turned to her and answered:

"Yes, but hurry up. I've had my face washed six times since breakfast, and there's two more ladies I've promised to wash me. But I hope to get a snooze before tea."—*London Spare Moments.*

If you are not feeling very well, skip this. It is the latest conundrum, fresh from the hatchery at Boston: "What is the difference between a man who has intermittent rheumatism and one who is well all the time and lives at home with his mother?" "One is well a part of the time and has rheumatism others, and the other is well all the time and has a room at his mother's."

DIAGNOSED.

Della—Orlando Smiggs was out to see me last night and he was, oh, so nervous, and showed so plainly that he had something on his mind that I was sure he was going to propose, but he couldn't muster up the courage.

Ophelia—Yes, Orlando is subject to those sudden attacks of cholera morbus.

A TRIAL FLOP.

Prof. Pendergast—Why did you change from homeopathy to allopathy?

Dr. Schemmerhorn—These fellows who flop from one political party to another get so much free advertising out of it that I wanted to see if the system would work in the medical profession. You see the code won't let us have any advertising unless it's free.

The witty "Daily Drift" genius of the *Lincoln Journal* became tired of his old back number teeth a short time ago and bought himself a supply of new ones, hence this protesting verse from his inspired pen:

O! for some teeth to fit my head
So firmly for the present
That I can tackle sticky bread
And not say things unpleasant!
But I am told to wait and wait,
My angry speech to hobble,
And some day I shall wear a plate
So tight it will not wobble.

"O! for a thousand tongues to sing
My great Redeemer's praise!"
How Sister Penny's voice would ring
In church on Sabbath days!
But neighbors among whom she'd gad
Around said Sister Penny,
For gossip work, already had
One lively tongue too many!

BOOK REVIEWS

IMPERATIVE SURGERY. By Howard Lilienthal, M. D., attending surgeon to Mount Sinai Hospital, New York City. New York, The Macmillan Company; London, Macmillan & Co., Ltd., 1900.

This work fills a long felt want for the general practitioner, and will prove in very truth a valued friend to those whose practice is located in isolated country towns or mountainous regions, far remote from the benefits of a large city and hospital facilities.

The author dedicates "Imperative Surgery" to his instructor, friend and colleague, Arpad G. Gerster, M. D., author of *Aseptic and Antiseptic Surgery*. The work is deserving of praise throughout, but especially for the attention given that appallingly neglected subject, post-operative treatment. Chapter IV gives valuable hints for preparation of a dwelling room prior to performing a major operation. The healing of wounds, hemorrhage, partial, local and general wound infection are ably treated in Chapter V.

Chapter VI takes up, with clearness and simplicity, combined with thoroughness, the special forms of infection, including phlegmon, erysipelas, abscess, furuncle, carbuncle, malignant and acute osteomyelitis. The chapter devoted to acute appendicitis is exceptionally good, especially the sections on palpation and post-operative treatment.

The illustrations are very fine and refreshingly different from those usually

found in surgical text-books. The subject of after treatment, so lamentably neglected by surgical authors, has, through "Imperative Surgery," received a valuable addition to its literature.

ALBERT L. BENNETT.

PROGRESSIVE MEDICINE, Vol. III., September, 1900. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 408 pages, with 14 engravings. Lea Brothers & Co., Philadelphia and New York. Issued quarterly. Price \$10 per year.

The September issue of *Progressive Medicine* is strictly in keeping with the high scientific and literary standard of the previous volumes. This number opens with a discussion on "Diseases of the Thorax and its Viscera, Including the Heart, Lungs and Blood Vessels," by William Ewart, M. D., F. R. C. P.

It would be difficult, indeed, to review this article in detail, as much valuable work has been crowded into the 137 pages allotted to it. The value of the anti-toxine treatment in pneumonia and tuberculosis is very carefully considered, leaving the reader to select his own plan of treatment, on the strength of the authorities cited. There has been no part of Dr. Ewart's subject

slighted, while lack of space has necessitated that certain points be touched on briefly.

Dr. Henry W. Stelwagon, clinical professor of dermatology at the Jefferson Medical College, has contributed a section on "Diseases of the Skin." He prefaces his work by quoting from Dr. Elliot's paper, on "The Role of the Pus Organism in the Production of Skin Diseases." This little selection is a most laudable extract, and is but the forerunner of an excellently written and culled contribution. The ever interesting processes of acute inflammation and new growths are handled in a manner worthy of the author.

Dr. G. Spiller of the Philadelphia Polyclinic writes an able article on "Diseases of the Nervous System." This selection has been arranged for the enjoyment of the general practitioner, and it can be said to fully demonstrate its purpose, by not delving too deeply into a subject which the practitioner in common is but slightly acquainted with. The treatment of epilepsy is handled in such an interesting way that the terse, well-toned ideas will remain with the reader. The writer reviews Dr. Olemacher's beliefs in "idiopathic" epilepsy and the relation of infantile diseases to epilepsy.

Dr. Richard C. Norris of the University of Pennsylvania closes the volume with a review on the latest ideas on obstetrics. As this department of medicine, especially in cities, has become more the part of the specialist than formerly, it is with special attention to the pathology of the neonatal

state and obstetrical operations that Dr. Norris writes.

This volume supplies a handful of good literature for the busy practitioner, the ideas having been compiled for ready reference.

THOMPSON'S PRACTICAL MEDICINE. A Text-Book of Practical Medicine. By William Gilman Thompson, M. D., Professor of Medicine in Cornell University Medical College, New York City, Physician to the Presbyterian and Bellevue Hospitals, New York. In one magnificent octavo volume of 1,010 pages, with 79 engravings. Cloth, \$5, net; leather, \$6, net; half Morocco, \$6.50, net. Lea Brothers & Co., Publishers.

This volume is more a recital of typical cases illustrative of the author's wide experience than a work of scientific investigation. In the study of law the "case system" is the approved method of instruction, but such a plan lacks adaptability in the medical science, due mainly to the fact that no clinical case can be used as a standard type of any one disease.

The author has taken much for granted, relying upon the reader's general medical knowledge to supply the detail of description which a treatise on general medicine should possess. For the student this work should be of great value, recommending itself mainly by the absence of any cumbersome material and the concise arrangement of the context.

The omission of much pathological discussion cannot be condemned if the book is primarily intended for the student, but its absence is regretted by

the general practitioner, who depends more upon the notes on morbid anatomy inserted in a work on general practice, than upon the specially prepared pathology.

The plates and therapeutics are truly up to date in this volume, which claims special attention to its department of curative medicine, thus compensating greatly for the brevity of space allotted to diagnosis and symptomatology.

THE PRACTICE OF MEDICINE. A Text-Book for Practitioners and Students, with special reference to Diagnosis and Treatment. By James Tyson, M. D., Professor of Medicine in the University of Pennsylvania and Physician to the Hospital of the University; Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia; member of the Association of American Physicians, etc. Second edition, thoroughly revised and in parts rewritten, with 127 illustrations, including colored plates. Published by P. Blakiston, Son & Co., Philadelphia. Price, \$5.50.

This work, which appears in its second edition, without doubt gives to the medical profession the most complete one volume practice of medicine yet published. A review even most critical, would fail to reveal any detrimental feature within its covers. The author freely acknowledges his indebtedness for certain parts of the text and appends in foot notes his authorities, thus relieving himself of all speculative theories.

The classification is admirably adapted for reference and index work. The rarer and more important forms of dis-

ease are prefaced by an interesting and valuable historical sketch, citing the special work of eminent clinicians. The synonyms are given at length and possible errors from misconstruction alluded to.

When certain mechanical technique necessary for the practitioner is described, the statements are simple, brief and explicit, the plates and illustrations are strictly in keeping with their accompanying descriptions, being accurate and concise, avoiding the confusing diagrammatic, stereotyped wood cut variety.

Medico-surgical cases are reviewed in full without entering the province of surgery. No omission has been made in the expectant, palliative or curative plans of treatment, according to the prognosis of the case. The pathology is comprehensive in its scope, enabling the reader to appreciate the morbid anatomy peculiar to the disease in question.

Certain portions of the work, especially on infectious diseases and hæmatology, commend themselves for their excellent discussion on etiology and diagnosis.

As the first edition well merited the favor of the profession, this publication cannot fail to receive the hearty endorsement of all lovers of well edited medical literature.

A New York paragrapher has scored an important scoop on the scientists by discovering that the seat of a dog's pants is located in his lungs.

THE COLORADO MEDICAL JOURNAL

.. AND...

WESTERN MEDICAL AND SURGICAL GAZETTE

A Scientific Medical Journal, Published in the Interest of the Profession of Colorado and Adjoining States—A Journal of Science, of News and of Medical Lore.

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DENVER, COLORADO, DECEMBER, 1900.

No. 12

ORIGINAL COMMUNICATIONS.

Mycosis of the Throat, With Report of a Case*

BY F. E. WAXHAM, M. D., DENVER, COLO.

Mycosis is an interesting disease on account of its rarity, its resistance to all ordinary methods of treatment, and on account of the necessity for correct diagnosis. Most of our text books ignore the subject entirely, or pass over it with brief mention. Anders, in his Practice of Medicine, considers it synonymous with thrush, but the two diseases are very different. Da Costa does not mention the subject. Pepper, under the title of Mycosis Pharyngis, gives the following brief but excellent description of the disease: "In this very unusual affection, also called mycotic pharyngitis, there develops principally in the crypts of the tonsils and on the base of the tongue, a peculiar yellowish or white deposit, more or less indurated and sometimes very hard and tough, and tenacious, and which is reproduced very rapidly after removal. The masses are formed of filaments, and spores which are found to be those of *leptothrix buccalis*. The organism penetrates to the deeper parts of the

mucous layer, though it is sometimes only superficially situated. There is no local evidence of inflammation found, nor are the symptoms witnessed usually other than slight tickling sensations in the throat. Sometimes even this is absent, while in other cases there may be actual difficulty in swallowing, and pain. The diagnosis can be made by the microscope. Apart from this the disease may readily be distinguished from follicular tonsilitis and diphtheria by its chronic course and the absence of constitutional symptoms. The affection is a harmless one, but the prognosis, as far as a cure is concerned, is very dubious. The disorder is very persistent and little amenable to treatment. The fungus should be scraped away with a curette and its former seat cauterized. Antiseptic solutions should also be frequently applied to the parts." Wood and Fitz give no reference to the disease. Flint does not mention it. Tyson does not refer to it. The Reference Hand Book of the Medical Sci-

*Read at the Denver and Arapahoe Medical Society, November 13, 1900.

ences does not speak of it, and Sajous does not mention it. Some of our authorities on the throat, however, give very clear and accurate descriptions of the disease.

Mycosis is from a Greek word signifying fungus. The disease is a parasitic one, and due to the implantation and growth of the *leptothrix buccalis*, the spores of which are long and thread like. This parasite gives rise to a fungous growth that appears in the form of small milk white or yellowish white tufts, soft and moist. These small tufts are usually situated in the crypts or in a wedge shaped manner in the mucous membrane just about the orifices of these crypts. Sometimes they spring from the mucous membrane between the follicles. They project from one-sixteenth to one-eighth of an inch above the surface of the mucous membrane. Occasionally these tufts are hard and horn like, giving rise to a true keratosis of the tonsils. Mycosis may be found upon the posterior wall of the pharynx, the tonsils, or upon the base of the tongue, and is known as pharyngeal, tonsillar or lingual mycosis, according to its location. The *leptothrix buccalis*, which is the specific cause of the disease, is commonly found in the secretions of the mouth of almost every person. In carious teeth these spores are found in great abundance. Why they so rarely obtain a foothold when so almost constantly present in the secretions of the mouth has not been satisfactorily explained. It must be stated in this connection that while the *leptothrix buccalis* is invariably found in the mycotic tufts excepting in the keratotic

form when they are sometimes absent, yet Siebenman considers that they are simply coincident and bear no relation to the disease. The majority of our authorities, however, look upon the *leptothrix buccalis* as the specific cause. Mycosis is quite as apt to be met with in perfectly well persons as among the more feeble and sickly, and quite as frequently among those whose teeth are well cared for, and free from cavities as among those with carious teeth. It most frequently develops upon the faucial tonsils, next upon the lingual tonsil and base of the tongue and lastly upon the pharyngeal walls, and still more rarely the pharyngeal tonsil may be invaded. The mycotic plants or tufts vary greatly in size, from a mustard seed to the size of a kernel of wheat or even larger. They also vary greatly as to number. There may be but a few at first on each tonsil, but they gradually increase in numbers and spread to the other favorite seats of the disease. There are no symptoms until a large number of plants have developed, and then there is a feeling of stiffness in the throat and some little difficulty in swallowing. Occasionally there is slight pain superadded. There is no inflammation present, and the condition is usually discovered by accident. Mycosis is at once and easily distinguished from tonsilitis, for in the latter disease the white spots of exudation are entirely confined to the follicles of the tonsils, not appearing upon the mucous membrane elsewhere, and the exudate is smooth and not projecting in prominent tufts. In tonsilitis the exudate is easily wiped away and more-

over there is inflammatory swelling of the tonsils, severe pain upon swallowing, and more or less fever; all these symptoms being absent in mycosis. In diphtheria we have the continuous patch of exudation and not the small white and isolated tufts so characteristic of mycosis. The microscope aids also in the diagnosis, in diphtheria the Klebbs-Loeffler bacillus being found and in mycosis the leptothrix buccalis.

Probably the collection of cheesy matter in the follicles of the tonsils resembles more nearly the disease under consideration than any other. The cheesy deposits, however, only occupy the follicles and are never seen springing from the mucous membrane. These collections rarely exceed more than one or two on each tonsil and show no tendency to spread. The microscope confirms the diagnosis.

Once established there is no tendency to spontaneous cure and the disease may last for years, or even a lifetime. The disease resists all ordinary medication. Our strongest antiseptics have little or no effect. This is from the fact that the roots of the fungus are deeply imbedded. The disease may be eradicated by the careful use of chromic or muriatic acid, but by far the most satisfactory and effectual mode of treatment is by the galvano-cautery. Indeed this is the only treatment that should be considered. After the mucous membrane has been anaesthetized with cocaine each mycotic tuft should be deeply cauterized with the galvano-cautery needle. Three or four tufts may be thus destroyed at each sitting and the process

repeated every three or four days until all have been exterminated. A mild alkaline antiseptic gargle or spray should be used between the sittings to allay the inflammation produced by the cauterizing. Treated in this manner there will be no return of the disease.

On July 2, 1900, Miss C—, age 28, a servant girl was referred to me by Dr. Gorseau. Upon examination mycotic tufts were found upon both tonsils and the base of the tongue. The general health of the patient was excellent, the teeth were sound and had received good care. No cause either local or constitutional could be discovered favoring or predisposing to the condition. The disease gave rise to but little inconvenience and had been discovered almost by accident a few weeks previously. The patient had used almost the whole list of antiseptics in turn by means of the spray, swab and gargle without effect. Among the remedies employed were peroxide of hydrogen, strong solution of bichloride of mercury, carbolic acid and the like. Dr. Gorseau, recognizing the character of the disease, referred the patient to me for confirmation of the diagnosis and for cauterization. The microscope confirmed the diagnosis and the use of the galvano-cautery entirely eradicated the disease.

Smallpox having appeared at Goldfield, the mayor issued a proclamation to the effect that "dogs and cats must not be allowed to run at large, but must be kept tied up to prevent them from acting as carriers of disease, and that all such found running at large will be shot by the proper officers."

The Influence of Myth and Superstition on Medicine *

By W. W. REED, M. D., FOWLER, COLO.

As this paper does not deal with a medical subject proper I may perhaps be a trespasser on your valuable time in presenting it. But as it does deal with one of the by-paths of medicine, and one that in its many phases is so often met with by every physician, I entertain the hope that you may be interested in the ideas herein presented.

That many remnants of ancient myth, legend and superstition still linger with our generation we see almost daily some evidence, but in no line of thought has superstition become so engrafted upon the mind or been such a stumbling block to progress as it has in that of medical science. We meet so many absurd and ridiculous ideas regarding disease and medicine in general, in persons of otherwise superior intellect that we are often not only surprised and disappointed but thoroughly disgusted. There are few country neighborhoods but have still some believers in the healing powers of the seventh son of the seventh son. We are greatly favored in our neighborhood in having two or three persons who can check any hemorrhage of either man or beast by repeating from memory a certain verse of a certain chapter of the Bible. I have been promised the reference to the magic verse but as yet have not obtained it, so am not able at present to communicate to you this very desirable accomplishment. Babies are still every-

where weaned when the sign is right. While treating a perforating wound of the chest not long since I was asked not less than half a dozen times if I had drawn a silk handkerchief through the wound.

We meet with evidences of the effect of superstition from national down to county and municipal legislation. We encounter it at the bedside of our patients arrayed in all of its ancient mysticism. We saw it cropping out at all sides in the fate of our late state medical practice bill. An attorney general of the great and enlightened state of Kansas in a recent opinion strongly illustrates its hold upon the lay mind. He says, regarding the enforcement of the medical practice laws of that state, that magnetic healers, hypnotists, and all other quacks can be prosecuted, but that divine healers claim to get their power from Jehovah and that, as he understands it, the rights and privileges of Jehovah can in no way be regulated or restricted by the statutes of the State of Kansas. And so illustrations might be multiplied *ad infinitum et nauseam*.

The idea to which I desire more particularly to direct attention is this: Why does this state of affairs exist? Is there any reasonable or sensible explanation why a man who in the conduct of his social, financial, political and religious affairs uses the utmost sagacity and intelligence, when it comes

*Read before the Colorado State Medical Society, June 19, 1900.

to matters of disease in his own family or that of his friends often is satisfied with nothing that resembles good sound reason and common sense, but must have something outside the domain of practical medical science—something supernatural?

In searching for an explanation of this question I have formed some ideas and drawn some conclusions that to my own mind at least offer a practical solution. During the earliest history of the human race primitive man was brought into intimate contact with nature in all her various and fanciful moods. He observed first of all the earth, sea and sky, with the principal orbs of heaven—the sun, moon and stars—and the attributes and effects of these bodies—light and heat, twilight and dawn. He also observed the clouds floating overhead, and the bubbling fountains and running brooks beneath his feet. The powerful but unseen wind, the vivid lightning flash, and the deep roll of thunder, shaking both heaven and earth filled him with feelings of the greatest veneration and awe. Of these wonderful and awe inspiring phenomena of nature observed for the first time, what explanation?

The recurring phenomena of day and night began to stir his imagination. The miracle of the dawn stealing silently out of the bosom of the night, the splendor of the noonday with its contests between sun and cloud, the sinking of the sun behind the western hills, the splendor of the afterglow fading slowly into darkness, were all phenomena of the phases of nature that sank deeply into the consciousness

of the race, and to it all the imagination responded with a prolific growth of poetic description. In these poetic outbursts these phenomena were explained by imputing personality to inanimate things. All nature, to their vivid imagination, was alive with invisible beings, and everything from sun and sea to the smallest fountain and rivulet was under the control of some particular divinity.

Thus the thunder storm, which to us suggests certain electrical and atmospheric conditions, was by him pictured out to be a huge dragon at which the heavenly archer was directing his swiftly flashing arrows. The phenomena of twilight and dawn were explained by the story that Eos, the Goddess of the Dawn, dwelt in a palace on the east side of the earth, from whence every morning she came forth in her yellow chariot drawn by four brilliant white steeds before her brother, the Sun, and drove through the sky shedding light abroad until in the evening she sank in the west before him, whence they traveled together during the night to the east again.

They were not so far off from the truth in the story of Apollo and Python in explaining the origin and effects of our plasmodium of malaria. Python, a monster serpent, was born of slime and stagnant waters from the deluge, and had long terrorized the inhabitants by making great havoc among their numbers. None had dared approach the monster, but at last Apollo the Sun went boldly forth, met, and after a desperate conflict, slew this demon with his golden shafts. So we see that

when primitive man endeavored to explain what he saw about him, instead of framing a scientific theory as we should now do, he created a myth. The extent to which this process of myth making was carried by the people of the successive ages of the world's history is a marvelous study within itself.

The complicated systems of the Greek, Roman and other mythologies are more or less familiar to all; and that medicine and disease furnished in them all a fertile field for its growth and culture may well be imagined. Aesculapius, the Greek god of healing, as you know, was the son of Apollo, the god of the Sun, and Coronis, the goddess of the dawn; but Aesculapius, presuming to call the dead to life, was slain by the god of gods, Jupiter, a sad warning, says McCully, to all modern physicians who feel themselves competent to conquer the Silent Messenger.

I refer to this subject of mythology to show that the myths have a claim on our attention. They are not to be regarded as mere idle nursery tales, but by tracing out their origin and hidden meaning they yield up principles of the greatest value to the philosophic historian who would thoroughly comprehend the mental development of the race. They are to be regarded as the beginnings of all natural science as we have it to-day—the first effort of the human mind to interpret nature, the first step in the acquisition of classified knowledge, the first perception of the relation of cause to effect.

To undertake to trace the successive stages of mental advancement through the centuries from the myth down to

our time would be a task too stupendous for this paper, but that it has been gradual and progressive we have complete and sufficient evidence, until now, before hypothesis, theory or conclusion will be accepted by the scientific world, it must be first subjected to the crucial test of rational observation and good practical common sense.

That this is true of science in general—physics, astronomy, geology, chemistry, etc.—all will readily admit, but that it is true in regard to medicine only in a very limited extent all must also admit.

The advancement of medicine as a science in the lay mind and that of some physicians has been greatly hindered, more so perhaps than that of any other science. This is largely due, I think, to the fact that medicine in its incipency had the misfortune to fall into the hands of an order of the priesthood, the Aesclepiadae, who used it largely as a means to work upon the credulity of the people.

By a great show of charms, mysterious rites, and superstitious ceremonies they maneuvered in such a manner as to impress the human mind that although many centuries have now elapsed since Hypocrates rescued the sceptre of medicine from the priesthood, they have left an influence upon the science and art of medicine so strong that it will probably be many centuries yet before its effects will be entirely eradicated. Hence we see superstition, at a time in the world's history when it was most prosperous, become wedded, as it were, to the science of medicine, and as a result of this union

we have an inherited tendency of great antiquity that is hard to shake off. The most enlightened people of our day are sometimes so affected by this inheritance from an ancestry who were ignorant, and therefore superstitious, that in spite of education and enlightenment they suffer themselves to be influenced by it.

If there is anything on this earth about which people are superstitious they are sure to be so about medicine and the cure of disease. An unseen agency is at work before their very eyes. They see the effect—friends stricken and die—but the power remains unseen and therefore some mystery must be there, some supernatural agency at work within. This is a natural conclusion of the human mind in dealing with such a proposition.

As medical men I think we often make the mistake of expecting too much of people in these matters regarding which the masses still remain in a very uncertain mental state. We see so often incredulity and superstition where we naturally expect intelligence and common sense that we get out of patience and are led to strongly disclaim against it. But this is no cure for the ill. Education is the remedy, and if people are ever to get above the mists of superstition they must be raised by education. Again, we often err, I think, in closing from them, in disgust, the only source from which this education ought to come. Only educated, honest men are competent to instruct. Yet as a matter of fact it is too often true that the super-abundant literature of the advertising charlatan and quack is the sole standard of authority of the public in

regard to physicians, medicine and disease.

There is no sensible reason why people should be permitted to think that there is the least thing secret, mysterious or supernatural connected with medicine or disease. We do not heal with the supernatural, the invisible, nor the mysterious, but with the natural, the visible, the practical, when seen with scientific and rational eyes. That medicine is as much an exact science as physics, astronomy, geology, or any of the so-called sciences I firmly believe, our much learned governor to the contrary notwithstanding.

A branch of learning, as I take it, to be entitled to be called a science must have its foundation built upon laws of nature or principles that are firmly established. In the practice of medicine I am aware that first, last, and all the time we are dealing with a force the nature of which is beyond our knowledge, viz.: The vital force, but cannot the same be said of the phenomena of heat, light and electricity? And yet we formulate principles and laws of their action, and reason on the several processes and call that scientific. We know quite as fully of the laws and processes that govern the action of the vital force, and in these facts why may we not find the foundation for the science of medicine? We cannot but admit the truth that there was a time when medicine had no established principles on which to rest, and its practice was consequently very largely that of pure empiricism, but cannot very much the same thing be said of the early history of all science?

The stigma that medicine is not an exact science will no longer apply to our profession and should be in every and all instances confuted. Our science sees in the laws governing the conduct of the vital force a process as uniform and unvaried as the Creator himself. It sees the cell as the prime origin from which all life starts, and in its changes, folding, unfolding, expanding, development and growth, it sees repeated with unerring uniformity the story of its progenitors. It sees the cells combine to form tissues, and tissues combine to form organs, and organs working in harmony to complete the perfect individual possessing the grand possibilities of a spiritual life that reaches onward and upward to the Infinite. Our science further tells us that so long as cell, tissue and organ perform their natural function properly and preserve their mutual harmony of action there is a state of health and well-being in the individual. But alas, we also learn from our science that there are other possibilities wrapped up within this same life force, that when this mutual function is disturbed, and this harmony of action destroyed, then the tendency is toward disease and death.

This suggests to the mind the oft repeated question of disease. What is it? The absurd idea of the ancients that it was an entity—something that entered the body and set up a disturbance and had to be driven out by charms, secret potions, or by some supernatural agency—we had just about out-grown when along must come the modern vagaries, equally absurd, that all disease is simply a mortal delusion

of an immortal mind, that it must be cured by divine agency, supernatural laying on of hands, by magnetic power, by the lifting of ribs, and pulling of legs, of its credulous victims. Many of these modern fallacies have for their basis a religious idea, and endeavor to supplant material treatment by a spiritual agency. Some of the people advocating these ideas are honest in their beliefs, and it should therefore be our aim to educate and enlighten them. Harsh criticism will do more to upbuild their numbers and convince people of the animosity of physicians and give them cause to pose as martyrs than any other course. We should rather endeavor to show the principles upon which their claims rest—meet them on grounds of common sense, and review the matter from a practical scientific standpoint.

It is well known by all intelligent physicians that if for any reason the organs of the body, either individually or combined, fail to functionate properly, if normal nutrition is disturbed by either internal or external, bacteriological, chemical, mechanical or toxic cause, we have disease. A positive definition of disease cannot be given. Both health and disease are relative terms, one is the direct antithesis of the other. Physiology acquaints us with the essential conditions of the one—pathology describes to us the changes that occur in the other. Health is a physiological process which tends to perfection and life, disease is a pathological process tending to destruction and death.

Educated physicians do not now be-

lieve that medicines cure disease, and only in a very limited extent is it believed that medicine antagonizes any of the many pathological conditions that so frequently exist. But it is pre-eminently considered to be the province and effort of the physician to discover and remove the acting cause of the diseased condition, and to apply such measures, medicinal or dietetic, as will best assist nature in guiding back the disturbed organs into their normal condition.

The physician who knows his physiology, anatomy, histology and pathology has laws and principles at his command that enable him to employ, if he uses good judgment, strictly scientific means in his therapeutic measures for the relief of disease. It is not uncertainty nor guess work with him, but he advises along the line of well known laws and prescribes in the light of accepted principles. It is as true in medicine as in all other sciences that in delving deeply we get often beyond the depths of human comprehension and catch frequent glimpses of the Infinite. The finite can never expect to reach the Infinite, nor the human to fathom the Divine; yet in the light of true science we can with certainty hope to differentiate the natural from the supernatural, and to rise above and beyond the level of myth and superstition.

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A WONDERFUL FAMILY.

John and Rachel Scott of Randolph county, W. Va., and their children, have been weighed recently, and all that part of the country is talking about the result.

The father and mother are still living in the house where their eight sons, whose combined weight is more than a ton, were born and raised.

Following are the age and weight of each member of the family:

John K. Scott, the father, aged 80 years, 250 pounds.

Mrs. Scott, the mother, aged 80, 200 pounds.

Jefferson, aged 56, weight 250 pounds.

Charles, aged 54, weight 315.

Hugh, aged 52, weight 315.

James, aged 50, weight 315.

Oliver, aged 48, weight 316.

Winfield, aged 46, weight 250.

John J., aged 44, weight 260.

Edward S., aged 42, weight 325.

The combined weight of the family is 2,796 pounds, an average weight of 279 3-5 pounds.—New York World.

The Symptoms, Prognosis and Treatment of Gastric Ulcer.*

BY W. T. LITTLE, M. D., CANON CITY, COLO.

The frequency of gastric ulcer is recognized by all, and in most cases its diagnosis is not difficult, although it may require some observation and study of the patient. It is far more frequent in women than men. Thus Welch (1) found in 1699 cases that 40 per cent were male and 60 per cent female. Brinton (2) puts the average higher—2 to 1. Fiedler (3) examined 2,200 bodies with reference to ulcer or ulcer scars, and found 20 per cent women to 1.5 per cent men, which gives the proportion 14 to 1.

It may occur at any age but varies considerably in different periods of life, appearing with the greatest frequency between the ages of 20 and 30. The average age of the male patients is greater than that of the female.

The order of frequency of the chief symptoms of gastric ulcer is about as follows: Pain, vomiting, hemorrhage, tenderness, pallor, constipation, thirst. The pain is definitely located in most cases but not always confined to one area. With few exceptions it is felt in the epigastrium, frequently in the epigastrium and back; very rarely in the back alone. It may radiate to the right or left hypochondrium, down into the abdomen or up into the chest, between the shoulders or into the back of the neck. A patient of mine, a young lady, was sent to Colorado for her health, having a slight morning cough

and a great deal of pain in the chest, mostly on the left side. Although she had gastralgia and vomiting at times little attention was paid to them either by her physician or herself. Physical signs were practically negative, but the frequent pains were believed to come from the lungs. Stomach rest promptly relieved her. The pain may be referred up the esophagus and it is then felt as a burning or gnawing under the sternum. Its character varies from this ill-defined burning or gnawing to the most intense suffering. It may be continuous with exacerbations excited by food, or, as is oftener the case, the pain is felt only after eating, to be relieved when the stomach is emptied either into the duodenum or by vomiting. It may occur when the stomach is empty and occasionally is even relieved by food. We must remember, however, that pain is not always present, and indeed will be absent in 7 per cent. of the cases.

Vomiting. While I have placed vomiting second in the order of frequency, it might with almost equal propriety precede pain. The time of vomiting varies not only in different subjects, but frequently in the same individual. The statements of authors diverge widely on this point. Ewald (4) and Leube (5) say the vomiting occurs soon after eating. Boas (6) puts it at the height of the paroxysm of pain, and

*Read at the Colorado State Medical Society J

une 21, 1900.

Osler(7) not for two or more hours after eating. These conflicting statements serve to show that the time of vomiting is not a factor in diagnosis. The quantity of vomitus usually corresponds to the amount of food and drink taken.

Hemorrhage. Hemorrhage is present in about 50 per cent. of the cases. As hæmoptysis not rarely ushers in the symptoms of pulmonary phthisis, so hæmatemesis may usher in the symptoms of ulcer. It occurs at all ages and equally in both sexes. The mortality from hemorrhage is greater in males, for what reason we do not know unless it is that the recuperative power of the female is greater. Death of females under 30 years of age is rare. Hood(8) some years ago called attention to the rarity of fatal cases of hemorrhage in gastric ulcer in young women. In 20 years—1870 to 1890—at Guy's Hospital, London, there were 36 cases of hemorrhage due to gastric ulcer; and though there were 29 of this number (27 females and 2 males) under thirty, but one case proved fatal, and that a male.

The bleeding is apt to be quite free and is usually preceded by attacks of pain of some days or weeks duration. One hemorrhage alone may occur, but as a rule there are several extending over as many days, and the individual may become almost exsanguinated. Death rarely occurs from one copious bleeding, but follows as a result of the repeated losses. Whenever the hemorrhage is severe blood appears in the stools as dark, tarry looking matter, and when it decomposes the stools be-

come very offensive. But not infrequently the hemorrhage is so slight that it all passes into the bowel. Hosslin(9) says that even so much as 500 cc. may only give to the stools the characteristic tar color. Its presence or absence, therefore, must not be left for the patient to decide, but the stools should be carefully examined microscopically for hæmin crystals. Care should be taken not to confound these with crystals of sulphide of bismuth, as the bismuth salts are frequently given for ulcer.

Tenderness can be elicited in the majority of cases and is usually limited to a small spot just below the ensiform cartilage. One of my patients during a gastralgic attack complained for several weeks of a small spot of tenderness in the fourth interspace near the left edge of the sternum. Much dependence, however, cannot be placed on this symptom because of the ease with which we can usually elicit tenderness from chlorotic and hysterical girls.

Pallor is present in about four-fifths of the patients suffering with ulcer of the stomach, and these will be found to have a hæmoglobinæmia of varying degree. The remaining number will show a healthy, even ruddy complexion. Constipation will be found to exist with a majority of these patients but has no significance. It may be due to the fact that most ulcer patients are women.

Excessive thirst may or may not be present. When present it is due, I believe, to an excess of hydrochloric acid.

Prognosis. Welch(10) computes the average duration of gastric ulcer to be from three to five years, but says this estimate is not of great value on

account of the absence of any regularity in the course and duration of the disease. In cases of very protracted duration, such as 40 years in a case of Habershon's, and 35 in one of Brinton's, it is uncertain whether the symptoms are referable to the persistence of one ulcer, or to the formation of new ones, or to the sequels resulting from cicatrization. In 110 cases analyzed by Lebert and quoted by Welch (11), 44 of which were fatal, the course was latent until the occurrence of the perforation or of profuse hemorrhage in 15 per cent.; the duration was less than one year in 18 per cent.; from 1 to 6 years in 46½ per cent.; from 6 to 20 years in 18 per cent.; from 20 to 35 years in 2½ per cent. As to the percentage of cures, authors vary. Welch (12) gives 85 as the percentage. Leube, 74 per cent. cured of 556 patients treated by himself. Ewald (13) gives 75 per cent. and Dobove and Remond, from a study of 100 patients, show only 50 per cent. complete cures. Greenough and Joslin (14), in an analysis of 187 patients treated in the Massachusetts General Hospital, give the following interesting figures: At the time of leaving the hospital there were cured 64 per cent., relieved 18 per cent., deaths 8 per cent.—otherwise 9 per cent. After a lapse of five years they gained information as to the condition of 114 of the same patients, with this result: Cured, 40 per cent.; not cured, recurrence, 36 per cent.; deaths due to stomach trouble, including those dead in hospital, 20 per cent.; deaths, cause unknown, 4 per cent. A recurrence took place in one-half of the cases. This

is interesting in that it shows the great liability to recurrence, and must impress us with the seriousness of the affection. And this experience will quite agree with our own in private practice.

Death is usually due to hemorrhage or perforation, although it may occur remotely as a result of cicatricial stenosis of the pylorus, or cancer developing in the scar of an old ulcer. In connection with this, I would relate a recent experience I had when the symptoms pointed to perforation with general peritonitis and the patient recovered. A young lady, age 22, was the subject of several recurrent attacks of gastralgia and hemorrhage, extending over a period of about four years. In the fall of last year she suffered daily with gastralgia for several weeks, culminating in severe hemorrhages, during which probably three to four pints of blood were lost. On the second day of the hemorrhages she complained of severe epigastric pain and tenderness, which rapidly spread up under the ribs, into the flanks and down over the abdomen. The tenderness was exquisite and she lay with the thighs flexed. There was delirium of a muttering and emotional type, during which she would frequently cry out with pain. The belly was full but not tympanitic; there was no vomiting (she was kept under the influence of morphine) and the temperature never rose above 100 degrees. At the end of forty-eight hours she began to rapidly improve. I have never been able to satisfy myself as to the exact condition present at that time for perforation and **peritonitis are so** universally fatal that the recovery

seems to preclude these.

The outlook, however, in the large majority of cases of gastric ulcer is most encouraging, for we can cure 40 per cent. of our patients permanently, and relieve another 40 per cent.

Treatment. Until recently surgery has found little encouragement in the treatment of ulcer. Operations had been performed for perforation, and occasionally for hemorrhage, but they were operations of last resort, and the results could not of necessity give much encouragement. The past few years have seen a fresh impetus given to surgery of the stomach, and the operative treatment of ulcer is being placed on a sound and rational basis. Our greatest danger will be in letting our enthusiasm for surgery outweigh our past experiences with the medical treatment, for the latter will undoubtedly continue to cure a majority of these cases. Operation should be limited to those cases wherein medical treatment has proven a failure. Andrews and Eisendrath(15), as the result of clinical and experimental work, reach the following very sound conclusions:

1. "The result of the practice of the best modern surgeons warrants the statements, previously made on theoretical grounds, that only operative interference can save the lives of a part of the patients affected with bleeding ulcers of the stomach, viz: Those not improved by internal medicine.

2. "Surgical intervention is to be recommended; first, in small, repeated hemorrhages; secondly, in severe ones occurring more than once, especially if

more than 500 c.c. are lost at each hæmostasis.

3. "A single, copious hemorrhage is not necessarily an indication for operation."

Medical treatment, or, more properly, dietetic treatment, has for its sole object rest of the affected organ. Rest in bed is essential, and the patient should be kept in bed not less than four weeks, and in bad cases even longer. When hemorrhage has taken place, or the ulcer is irritable, with pain and vomiting, the patient should be fed entirely by the bowel for the first week or ten days. If, by that time all gastric symptoms have subsided, we may begin cautiously to add nourishment by the mouth, continuing the rectal feeding at longer intervals. I give then peptonized milk or plain milk diluted with lime water (four to six tablespoonfuls to the glass), egg albumen water, beef tea or stock soups, purees made by thickening clear soup with well cooked arrow-root, finely ground rice or thoroughly baked wheaten flour, somatose added to milk, coffee or cocoa. Toasted cracker may be served with the clear soups. Ice cream is well borne and usually very grateful to the patient, and I allow it freely. Patients who are doing well are usually hungry by this time and clamor for a more substantial diet, and the physician and nurses must exhibit much tact and firmness. At the end of the second week I drop the rectal feeding and increase the quantity of the liquids, adding eggnog with but little whisky or brandy, oatmeal well cooked and strained, served with cream and very little sugar. Gruels made from

other of the breakfast foods may be allowed for variety, but they should always be well cooked and preferably strained. At the beginning of the fourth week scraped beef is allowed once and later twice a day. This is best made into a little mass and broiled. Minced breast of fowl, baked or boiled fish and very soft egg may alternate with the scraped beef. Milk and lime water or carbonated water or plain water may be drunk with the meal and is preferable to tea or coffee. If at the end of the fourth week our patient has been free from pain, tenderness and vomiting for at least three weeks, we may allow him out of bed. He may now have in addition a small, mealy, baked potato, toast, custard, rice or tapioca pudding, oranges, stewed apples and any other light dish he may crave. This diet should be continued for at least two months, after which, if all is well, an ordinary diet may be resumed, avoiding harsh foods or great quantities.

From the beginning I have the patient take a half teaspoonful to a teaspoonful of artificial Carlsbad salts in a large cup full of hot water every morning before eating, and if there is much thirst, indicating an excess of hydrochloric acid, this is repeated during the day. Besides its corrective action on the stomach, this regulates the bowels if constipation exists.

For the anemia iron is necessary, and while the particular form in which it is given is of little consequence so long as it is assimilated, I have gotten the best results from hæmoferrum, four pills a day. Arsenic may be of service, preferably as arsenious acid. It is usual

to find a long list of remedies recommended for diseases that resist drug treatment, and ulcer is no exception to the rule. They seldom prove valuable except in the hands of their enthusiastic exponents. Of these bismuth subnitrate and nitrate of silver I have tried, but could never satisfy myself that they were of any appreciable benefit.

The treatment of hemorrhage I will not consider except to condemn hæmostatics by the mouth, such as tannic acid, acetate of lead, etc., for I have seen them excite nausea and vomiting and thereby provoke renewed bleeding.

At the first sign of recurrence, and particularly in hemorrhagic cases, the patient should be sent to bed and dieted for two or three weeks. In this way we may check an activity which might result seriously, as well as keep the ulcer in a more favorable condition to heal. This will occur, as I have said before, in 40 per cent. of our cases. To the surgeon we will now look for help for the remaining number.

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CLINICAL REPORTS.

Rupture of the Abdominal Wall During Labor.

BY O. J. PFEIFFER, M. D., DENVER, COLO.

Professor of Clinical Surgery in the Denver College of Medicine and Visiting Surgeon at St. Luke's Hospital.

It was an unusual incident in the course of the recent labor of a young primipara, when the head was on the perineum and the pains were severe, to have her ask "What that lump was?" at the same time laying her hands upon her abdomen under the bed clothes.

Upon turning down the sheet her hands were found to cover a lump the size of a musk melon, bulging from the distended abdomen over the left side of the fundus of the uterus. Visions of hernia of the pregnant uterus through the abdominal wall, of rupture of the uterus and protrusion of the head of the fœtus within the abdominal wall, and of plain umbilical hernia of the intestine flitted before me, until careful examination and the absence of shock, pain, or collapse enabled me to exclude any very dangerous state of affairs other than that I was dealing with a hernia of the intestines which was getting larger with every pain, and that the thing to do was to terminate labor with the forceps. This was done as soon as possible and the afterbirth was delivered.

Examination of the distended and flabby abdominal wall showed the umbilical ring to be intact and empty. The finger could make out the edge of the ring very clearly. About two inches above the umbilical ring was a rent in the linea alba, big enough to lay the edge of the whole hand in, between the bellies of the recti muscles, and through this protruded masses of intestine which could not be reduced or would not stay reduced inside the abdominal wall because the rent was so large and the walls were so loose that efforts at reduction of the hernia simply pushed the whole mass of loose wall and intestine back against the spine. The rent could not be made taut and held forward so as to permit the bowels to be pushed back through it and kept there. Therefore an abdominal swathe was lightly placed about the patient and the result of spontaneous retraction of the abdominal wall was awaited, with the purpose of sewing up the rent when the walls of the recti muscles came near enough together.

At first gaseous distention of the pro-

truded intestines and colon (which had not protruded) brought up the possibility of a volvulus. Gradually, however, the recti drew together, the abdominal muscles retracted, and the intestines disappeared with the colon under the continually swelling bellies of the recti muscles. This continued un-

til, at a time when the date for operation to sew together the edges of the linea alba between the recti muscles had been set, the fibers of the linea alba had so drawn together that the rent had been obliterated and the hernia had disappeared.

A Case of Enormous Congenital Multiple Hæmangiomata Cavernosa.

By WM. N. BEGGS, M. D., DENVER, COLO.

Baby S. was born October 31, 1898, and was brought to my attention in the following March. He presented the appearance shown in the photographs. The mother stated that the condition was present at his birth and the growth was in about the same proportion to the size of the child as when photographed. The labor had been only moderately se-

inches in length. The circumference of the chest was $21\frac{3}{4}$ inches; the left



vere (the mother was a multipara.)

March 23, 1899, the child was $34\frac{1}{2}$

semi-circumference was $13\frac{3}{4}$ inches, the right 8. The circumference of the middle of the left upper arm was $8\frac{1}{2}$ inches, that of the right 4. The tumors, as shown in the illustrations, were distinctly lobulated and there were a couple of smaller ones, not appearing in the photographs, in the left wrist and dor-

sum of the hand at the metacarpo-phalangeal line. In consistency they were very soft and flabby, but not distinctly fluctuating. The growths were distinctly subcutaneous and no discoloration of the skin was apparent. Pressure seemed to exert no effect on the masses. There was no inflammation or tenderness and the tumors seemed to cause the child no unpleasantness except perhaps the slight discomfort from their simple physical presence.

At the time the child came under observation the diagnosis lay between lipoma, soft fibroma, or hæmangioma cavernosum. The clinical characteristics were consistent with either and not distinctive enough to permit a positive diagnosis. An X-ray examination made by

Dr. George H. Stover gave scarcely more evidence as to the nature, extent or origin of the growth. The bones of the arm were normal in outline. The ribs, however, could be traced but a short distance, either anteriorly or posteriorly, they not being very opaque and the tumor mass casting as deep shadows. That fact was rather in favor of the diagnosis of hæmangioma on account of the known opacity of the blood.

The child shortly disappeared from my observation and I heard nothing further about it until February, 1900, when I was informed of its death on the 21st from catarrhal pneumonia. An autopsy, consisting simply of an incision into the growth, confirmed the diagnosis of cavernous angioma.

Walter Cheesman; vice-president, W. N. Byers; treasurer, A. G. Rhoads; secretary, E. K. Whitehead.

Smallpox is very prevalent in Alaska.

The Colorado Fuel & Iron Company has set aside 20 acres of land near Lake Minnequa for a park in which it will build its permanent hospital.

The Vernon School, in the eastern part of Arapahoe county, Colo., was closed in the early part of November, on account of scarlet fever among the pupils.

The board of directors of the Colorado Humane Society for the ensuing year consists of Walter Cheesman, Ann Hunt, William Smedley, George H. Harvey, Robert M. Golder, William N. Byers, R. W. Woodbury, George F. Dunklee, Jacob J. Elliott, John F. Farley, A. G. Rhoads, C. S. Thomas, E. K. Whitehead, Edmund D. Davis and W. G. Alexander. Last year's officers have been re-elected as follows: President,

The Denver health department wants the City Council to pass an ordinance requiring all veterinary surgeons to register with the Board of Health, and to report all cases of sick cattle in dairy herds from which the city may be supplied with milk. The purpose is the early detection of bovine tuberculosis. It would be better for the city to require periodical tuberculine tests to be made in all dairies.

SELECTED ARTICLE

The Abuse of Certain Stimulants and Cardiac Remedies *

By G. BAUMGARTEN, M. D., St. Louis, Mo.

The period of "*purgare, seignare, clysterium donare*" is long since past; but the extravagances of long-forgotten Sangrados continue to be sources of amusement, notwithstanding we confirm in our own daily practice the grains of truth on which they were based. In place of the discarded purgatives and pukes we have put the stimulants of to-day. When we have done with laughing, it is fitting to reflect what may be our own exaggerations in therapeutics. Looking about in my own practice and that of others, I am led to believe that we are by no means so free from error that future Molières would not be justified in castigating *us*, even if the modern excesses do not lend themselves to equally drastic treatment.

Out of the remedies which at the present day are often used immoderately and inconsiderately let me pick only a few so-called heart stimulants. All these are subject to the universal law that, when the attainable degree of stimulation is exceeded, *i. e.*, when they are used in too large doses or for too long a time, they effect the opposite of the desired end, namely—depression.

By stimulation we mean the increase of the normal, or the present, activity of an organ; by depression, the diminution of its function, a condition equivalent to the state of fatigue of a normal organ after prolonged activity, no matter whether it is brought about by direct action of drugs or after preceding

stimulants. In this all our stimulants behave alike; excessive doses of a stimulant or sufficiently prolonged stimulation are inevitably followed by depression and paralysis. The latest important author on pharmacodynamics, Cushny, of Ann Arbor, says: "When stimulation is prolonged or excessive, the protoplasm generally becomes depressed and finally loses its activity entirely."

Digitalis (to which we owe only thanks and praise) although it is frequently prescribed unnecessarily and used erroneously is saved from the worst abuse by the generally remembered precepts as to its cumulative action, to which we are inclined to credit every excessive or contrary effect of the drug in our hands. But such effects may be attributed to several causes, viz: (1) gradual retention of the digitalis after continued use, because it is excreted even more slowly than absorbed, and (2) to more rapid and unusual accumulation by reason of morbidly insufficient function of the kidneys; but (3) they may also occur without actual accumulation, in cases in which the drug has had a favorable influence upon the heart's action, when by this very favorable influence it has become less or not at all necessary—where it is no longer "indicated." Penzoldt summarizes the degrees of physiological effects of digitalis on the heart as follows: "First degree.—The

*Based on a paper read before the Verein Deutscher Aerzte, February 9, 1900.

individual contractions of the heart are increased in force and lengthened, and in consequence the blood-pressure rises, while at the same time the pulse-rate is slowed (stimulation of the vagus). Second degree.—The pulse-rate *rises* with at first a rise, and later a fall, of blood-pressure. Third degree.—The pulse becomes smaller, less frequent and irregular, while the blood-pressure falls until the heart is arrested in diastole. It is only the first degree that we wish to utilize in therapeutics. When the second degree is reached, we talk of cumulative action, and yet I have witnessed a case in which the physician disregarded the warning of the frequent pulse and rapidly-sinking blood-pressure, until the third degree led to collapse, though not actually to the death of the patient. It is so difficult, often, to distinguish at the bedside between the effects of our remedies and the symptoms of the advancing disease.

These reflections, of course, were not intended to embrace the cases in which the drug was not indicated, hence erroneously used. The indications for this remedy are not nearly so precise that even the most skillful among us does not, occasionally, prescribe it only tentatively, or even incorrectly; and, let me repeat, it is the wholesome dread of its cumulative action that protects it, in a manner, from abuse.

The same, alas, is not true of *Alcohol*. In this place, I refer primarily to its employment as a stimulant of the heart's action, the value of whose rapid, reliable and easily controlled effect cannot be overestimated. In the words of Binz: "Moderate doses raise the pulse-rate,

the arterial pressure and the velocity of the blood current. Stimulation of the accelerated cardiac nerves is the cause.

* * * A dilatation of the cutaneous vessels takes place [which], * * * is to be regarded as the result of its action upon vasodilator nerves.

* * * These conditions of stimulation change to the contrary when alcohol bathes the nervous system in greater quantity." It is not very difficult, in calculating the doses of alcohol for a given case, to keep within the limits of usefulness, by remembering that according to pretty accurate determinations the maximum daily dose permissible equals about one gram of absolute alcohol for every kilogram of body weight, *i. e.*, for an average adult man (160 pounds) about two and one-half ounces, or about five to six ounces of whisky. Within this limit we can fully utilize the stimulant effect of alcoholics, beyond it lies a risk of causing depression in place of the desired stimulation. (This does not hold true of patients suffering from prolonged fever, who often bear larger amounts). Let me also call to mind and commend the rule of Lauder Brunton, by which we can judge whether alcohol is of use or not. "If it is found that the alcohol (*a*) renders the tongue moist, (*b*) slows and strengthens the pulse when it is too quick, or quickens it when it has been abnormally slow, (*c*) slows the hurried respiration, (*d*) renders the skin cooler or moister when too hot and dry, and (*e*) lessens delirium and brings on sleep,—then its action is beneficial. If it have an opposite effect it is harmful." These points can often be determined

by watching the patients for a quarter of an hour after the dose has been given. But how often do we witness, at the bedside, the administration of doses of alcohol which pervert the initial stimulation into depression! I have seen infants drunk in their cradle—strictly according to the doctor's order!

All this is an old story. The abuse of *Strychnine* is of more recent date. It is worth while to consider its physiological action upon the heart and circulation a little more closely. The principal effect of strychnine consists in increasing the excitability of the spinal cord, inclusive of the vasomotor and the respiratory centers. The reflex irritability of the vasomotor center increases, the peripheral arteries are constricted, and the blood-pressure rises.

The greater blood-pressure, of course, reacts upon the heart in the usual way, partly by exciting stronger contractions, partly by irritation of the inhibitory center and moderate slowing of the rhythm. Whether strychnine has also a direct effect upon the heart itself is still in doubt; Cushny denies it; Penzoldt, in his excess of caution and skepticism, omits all mention of it. The clinical experience (which I can confirm) that dilatation of the heart is sometimes reduced by the daily exhibition of small doses of strychnine, Binz mentions as "conceivable, for small doses of strychnine excite the nerves and the substance of the heart, and from this may follow a betterment of its nutrition." His proof for the stimulant action on the "substance of the heart" (which must be taken to mean

the heart muscle) consists in a quotation which I have not the means to verify; reasoning from analogy, I am disposed to doubt it, for upon muscular tissue in general strychnine has not the least direct influence. On this point Cushny writes as follows: "Strychnine seems to be of benefit in some cases of heart disease and is often supposed to have a direct action on that organ. Any improvement which may be produced by it, however, must be attributed to the constriction of the vessels, and the indications for its use would seem to be a low blood pressure. The increased arterial tension may be prejudicial to the heart in some conditions through increasing resistance against which it has to contract."

The main indication for the use of strychnine in heart weakness, therefore, is low blood-pressure, and its action results through constriction of the vessels. This indication, however, by no means always covers that for digitalis. In my opinion the raised blood-pressure effected by strychnine proves useful to our patient, in the long run, not by any immediate effect upon the power of the heart, but rather by increasing the velocity of the blood current and consequent improvement in the functions of vital organs—the brain, the kidneys, etc., including, of course, the muscle of the heart itself.

To obtain the best results from its administration in heart weakness, strychnine must (1) be given in small doses, because large doses, apart from the undesirable effect upon the entire spinal cord by raising the blood-pressure, immoderately increased the resist-

ance to the heart's action long before they can come to its assistance indirectly; and (2) it must be employed at a time when the strength of the heart has not yet sunk too low. If Binz is right in stating that strychnine does not produce the elevation of the blood-pressure by stimulating the vasomotor center, but by increasing its reflex irritability—and hence peripheric impulses are required to accomplish the contraction of the vessels—then the strychnine *must* fail us in that very state of collapse in which modern routine so often continues to use it as a last resort. We do, indeed, sometimes succeed, under conditions which it is easier to divine than to recognize, by its use to prevent or delay impending collapse; but when collapse has once set in, I am convinced the drug is of no good effect. Moreover (3) it must not be given even in moderate doses for too long a time, because like digitalis, it may accumulate in the body. Physiologists and pharmacologists seem to be better informed as to the cumulative effects of strychnine than the clinicians. Lauder Brunton calls it “a cumulative poison, as it contracts the renal arteries and thus prevents its own excretion.”

All these rules we disobey far too often. The special indication for strychnine is too often supposed to be the same as for digitalis. There are cases in which this is correct, but in many more cases only one or the other remedy is indicated; *e. g.*, in fevers, while the heart's power is still sufficient, the tension of peripheric arteries may be reduced to a dangerous degree by other causes than heart weakness; in that case strychnine

in a few decided doses is the right remedy.

After all the results of experimental pharmacology it cannot be doubted that relatively large doses—large within therapeutic limits—continued for too long a time or repeated at too short intervals, will, in place of stimulation, effect paralysis of the respective centers. This paralysis, says Binz, may be conceived as arising from the excessive activity that was called forth in the protoplasm by the strychnine, or from the subsequent direct paralysis that follows upon the original excitation, here as well as after all other stimulants. Unfortunately, we do not clearly recognize it at the bedside; if it supervenes, after the strychnine had been evidently useful in the beginning, we are inclined to ascribe it to the advancing disease; our remedy has not been effective enough, we increase the doses, and finally lament that the patient could no longer be benefited even by *so much strychnine*! I have not only witnessed such persistency at the bedside, but been guilty of it myself.

It is easier to recognize the unintended stimulation of the spinal centers when carried to the highest pitch. Last year a phthisical patient of mine, while spending the summer in North Carolina, had become weak from diarrhea, and bedridden, and was treated to liberal doses of strychnine until tetanic convulsions set in. At my urgent request, by letter, the drug was discontinued, and both convulsions and diarrhea ceased. Not long ago I observed at the bedside a therapeutical acute strychnine poisoning, which expressed itself in the

most intense mental and sensual excitation, in general hyperesthesia, exquisite acuteness of sight and hearing, restlessness, hurried speech, the hasty flight of thought, extreme anxiety, and exaggerated reflexes. This drug effect had no relation to the subsequent death of the patient; but, on the other hand, the state and disease of the patient gave no clew whatever to the symptoms mentioned, which I can ascribe only to the large and frequent doses of strychnine.

Strangely enough, the same sort of perseverance has latterly been shown in the use of *Nitroglycerine*, a remedy whose eminent property of lowering the blood-pressure and thereby diminishing the resistance to an overburdened heart is so much abused, and which is so often carelessly used as a substitute of digitalis that has the exactly opposite effect. The action of digitalis can be supplemented or modified by nitroglycerine, but never substituted. Most reprehensible is its use in collapse, when the enfeebled heart is no longer able to keep the blood-pressure up to the lowest degree necessary for bare life.

These considerations need go no further into the cardiac materia medica; let me only once more lay stress upon the law—that all stimulants carried to excess, whether of dosage or protracted use, finally produce depression. We can get only so much stimulation out of one remedy and no more; the limitation may not always be plain or easily determined, but should always be looked for and never be forgotten. But what are we to do when we have arrived at the end of the usefulness of one heart remedy, digitalis for example, and yet must

not give up the fight? We may then have recourse to other remedies of similar properties and use several at the same time, each in its proper measure, *e. g.*, in case of low pressure, caffeine or strychnine *in addition* to the proper dose of digitalis; in case of contracted arteries, alcohol or nitroglycerine. And when the normal dose of alcohol falls short of the effect we intend, we are not to increase the dose, but employ other stimulants *along* with it—ammonia, camphor, etc., each within the limits of its effective dose. Camphor, by the way, seems of late to have fallen into unmerited neglect.

To realize the absurdity of modern excesses in stimulation it is necessary only to recall to mind the scene that we all have had opportunity to witness and which could be prevented by a closer study of prognosis than is common, a better knowledge of the action of stimulants, and the courage to abstain from attempts that are recognized as futile. Already the face of the patient is turning pale and ashy, the cheeks and lips are cyanotic, the jugular veins are full and undulating, respiration is labored, quickened or convulsive, the legs are dropsical, the kidneys have ceased their function entirely, the heart-sounds are feeble and unequal in force, the number of the pulses no longer equals the beats of the heart, the pulse vanishes, hands and nose are cold and clammy, the forearms covered with beads of sweat, the intellect clouded, the patient not able to think, much less to speak. And still we persist in "firing up" with whisky and champagne; strychnine, nitroglycerine, brandy, ether are in-

jected, one on top of the other. All that has ever helped a failing heart, no matter when or how, is promiscuously poured into the dying body. Truly, the step from the sublime to the ridiculous is short; and how often we take it!

HEROIN AND HEROIN HYDROCHLORIDE.

Heroin and heroin hydrochloride form an essential part of so many formulae for the relief of cough, dyspnea, and pains in the treatment of respiratory affections that it is important to determine in what combination they will prove most effective, and what are their incompatibilities. Owing to the insolubility of heroin in watery solutions it is necessary to add a few drops of some acid, acetic or hydrochloric, in order to effect its solution. This can be entirely obviated by using the hydrochloride, which is freely soluble. The only incompatibilities of heroin and the hydrochloride worthy of special mention are the alkalies, such as bicarbonate of sodium and carbonate of ammonium. On the other hand, salts of neutral reaction, such as iodide of potassium or chloride of ammonium, may be used in the same mixture, and this also applies to acid salts, such as the hypophosphites or acid phosphates. The vegetable expectorants, as ipecac, senega, squill, and sanguinaria, are entirely compatible with heroin and its hydrochloride. Although many physicians employ heroin without admixture very desirable results have been reported from combinations with iodide of potassium, chloride of ammonium, and the vegetable ex-

pectorants, according to the indications present in particular cases. A word as to the dosage of heroin and heroin hydrochloride may be of interest here. The large doses at first recommended at the time of the introduction of heroin are no longer preferred by the majority of authors, the average dose ranging from 1-24 to 1-12 grain in adults, and 1-120 to 1-60 grain in children. It is advisable not to employ larger doses until the smaller ones have been given a trial. Furthermore, many physicians now resort to the hypodermatic use of heroin hydrochloride in cases in which it is desirable to obtain an immediate effect, and especially in the treatment of spasmodic conditions, such as asthma, care being taken in the preparation of solutions not to add the drug until the water has partially cooled.

DENVER OLD LADIES' HOME.

The following are the officers for the coming year: President, Mrs. Charles Denison; vice-presidents, Mrs. C. B. Kountze, Mrs. F. A. Keener, Mrs. Charles Ballia and Mrs. F. Brind; trustees, Mrs. E. J. Sewall, Mrs. C. S. Thomas; recording secretary, Mrs. H. J. Newman; treasurer, Mrs. G. E. Dimmitt; corresponding secretary, Mrs. M. Murray; auditor, Mrs. Thomas Keely. The following are committee chairmen: House, Mrs. E. J. A. Rogers; purchasing, Mrs. N. C. Vosburg; admission and dismissal, Mrs. Henry Michael; library, Mrs. Toy; Sunday services, Mrs. Robert Jones; burial, Mrs. Gordon.

THE COLORADO MEDICAL JOURNAL

AND WESTERN MEDICAL AND SURGICAL GAZETTE

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No. 12

EDITORIAL

TWENTIETH CENTURY MEDICINE A LIBERAL EDUCATION.

I

Though the century is purely an artificial division of time, being indirectly founded on the normal number of one's fingers or toes, yet the end of a century has come to be considered a divisional line for events and a convenient time for a general casting up of accounts. In such a reckoning the achievements credited to the youth stand in general

in unfavorable contrast with those of the centenarian, but are now and then brought into enviable prominence by the premature reckoning; and so it happens that at the end of the nineteenth century that region of the globe whose metropolis is on the 105th meridian West, stands in the role of a youth that may fearlessly challenge the oldest to a comparison of all that owes existence to human genius, energy and enterprise. Dry and treeless wastes of vast extent have here been suddenly transformed into orchard and meadow.

garden and fruitful field. Countless enterprises of colossal magnitude have magically altered the aspect of the country, and what was once but a wilderness and waste has suddenly become a health resort for all the world, where the invalid who comes early may hope to live long. Truly, here is fuel to fire the cockles of one's admiration. But this is not all. Foundations and equipments for the higher training of the intellectual faculties have, in strong contrast with the usual precedent elsewhere, kept equal pace with the material progress of this once hopelessly inhospitable land. Here the student of any and every useful science and art, the academic and the professional student, may pursue his course in institutions of high efficiency. In the van of all we would place the colleges of medicine.

II

It may seem strange to some that the medical college should, from an educational standpoint, be seriously named in precedence of the so-called academic college which has from time immemorial superciliously held without challenge the proud post of dispenser of a liberal education; but intellectual revolutions have of late been rife, and the latter half of the nineteenth century has ushered into the college world a revolution that will not be quelled until the last cavalier of medieval fancies about the proper composition of a liberal education has unconditionally surrendered. From this let us not be understood as lacking in respect for the time-honored trivium-quadrivium "arts;" indeed, we confess to an admiring weakness for certain academic studies

and particularly for the humanities, the legerdemain of algebra, and the eternal truths of geometry. Surely, considered merely as a thing of beauty, what truth is more admirable than for example, that the surface of a sphere is equal to four great circles? And our admiration for the beauty of this truth is heightened when we reflect that man, sprung from the amoeba, rose to the discovery and demonstration of that truth. And here we would parenthetically observe that much is gained for the admiration of the achievements of man by viewing him in the modern biological order rather than in the "ontological order" of former times; in other words, by viewing man, not as created a little lower than the angels, but as evolved from a protoplasmic cell.

The scope and duration of instruction in medical studies has in recent years been greatly extended, so that now the course of medical instruction is equal, in time at least, to the quadrennial academic course, and must at no distant day be regarded as conferring upon the one who pursues it intelligently and faithfully the highest type of a properly denominated liberal education. As the world grows in wisdom it must come to be recognized more and more that the "proper study of mankind is man." To prosecute that study with intelligence requires a previous training and grounding in the better parts of the academic course.

Then, too, from the view-point of mental discipline, the medical course is second to none. This assertion will strike the ordinary academician as preposterous, who, however, being wholly

ignorant of the medical aspect of the matter, can no more properly judge of the merits of the case than he can, in the seclusion of his study, determine the depths of the ocean. Huxley, the master mind of the nineteenth century, said: "There is no side of the intellect which it ["a thorough study of Human Physiology"] does not call into play, no region of human knowledge into which either its roots or its branches, do not extend; like the Atlantic between the Old and the New Worlds, its waves wash the shores of the two worlds of matter and of mind." And this is said of a single branch of the science of medicine. Add to this such subjects as physics, chemistry, general biology, bacteriology, therapeutics, pathology and diagnosis, and surely the mastering mind will not become enfeebled through lack of exercise.

If disposed to quibble, we might in turn call in question the advisability of certain academic modes of mental discipline; but for the present we shall be content to venture the query whether the mathematical training required for entrance to our standard medical colleges is not all the mathematical training that is profitable for the general well-being of the mind. Gibbon tells us that he "relinquished forever the pursuit of the mathematics" as soon as he "understood the principles." He further says that he did not "lament that he desisted, before his mind was hardened by the habit of rigid demonstration, so destructive of the finer feelings of moral evidence, which must, however, determine the actions and opinions of our lives." The in-

capacity of professional mathematicians for dealing with problems of mixed uncertainties is notorious. Robert Stephenson, of lasting fame as a mathematician and the designer of the tubular bridge, raised high the hopes of his constituents by entering parliament, but proved to be a signal failure in dealing with the complex and uncertain affairs of state. We would, however, not advise the ordinary youth to repress, through fear of injury to the brain, any moderate inclination he may have for the pursuit of mathematics; but on the contrary, we would strenuously recommend to all who have inclination and opportunity for profitable study to pursue with vim and vigor not only mathematical studies, but also the whole academic course, and particularly the ancient classical languages, even a rudimentary knowledge of which, if thorough, must be of service in every walk of life, and especially in the study of medicine.

From all these and from other considerations not now to be discussed, we are pleased to regard a thorough medical education, in its unprofessional aspect, as the one most deserving to be considered liberal; and we venture to predict that ere the end of another century the degree of M. D. will enjoy the social preference long given to the degree of M. A.

ALLISON DRAKE.

In addition to its beer-arsenic poisoning epidemic, Manchester is suffering from an epidemic of the influenza, twenty deaths having been reported prior to December 4.

SOCIETY REPORTS**Cripple Creek District Medical Society**

This report appears in no other medical journal.

A regular meeting of the Cripple Creek District Medical Society was held at the office of Dr. Pennock, with the following members present: Hayes, Kitchen, Trahan, Magruder, Cunningham, Pennock, Kirby, Heller, McKown, Meiere, Cohen, Williams, Torrance and Frankle. In the absence of the president and the first, second and third vice presidents, Dr. Pennock presided.

By unanimous consent the order of business was deviated from and Dr. Trahan, in a few well chosen words, informed the society of his intention of permanently removing from the city and requested that he be permitted to announce his resignation verbally. This was acceded to. On motion of Dr. Meiere the resignation was accepted with regrets and Dr. Trahan was made an honorary member of the society.

The paper of the evening on "The Use of Creosotal in the Treatment of Acute Lobar Pneumonia,"* was read by Dr. Frankle.

DISCUSSION.

Dr. Kirby opened the discussion by stating that in his experience treatment had aggravated the condition. He had not found anything of special value. He had been in the habit of administering a purge and then depending on cardiac stimulants, such as infusion of digitalis, caffeine and strychnine.

Dr. Torrance: Had not used creosotal.

When he saw the case early he administered a purge and followed it with aconite. Later he used strychnine and caffeine.

Dr. Trahan: Had not used creosote. He recommended the use of counter irritation by means of mustard; thought it limited the inflammation. In treating high temperature he had used crushed ice and flaxseed meal as poultice. At the crisis he had seen the use of oxygen gas followed by recovery.

Dr. Cohen: Did not believe in the use of creosote on account of the irritant effect on the stomach of the patient. The treatment necessarily depended on how much of the lung was affected. When the temperature was high he used cold sponges. Saline injections per rectum seemed to liquefy the secretions. Heart stimulants were given as indicated.

Dr. Heller: Had used creosote late in the disease in slow and inactive conditions of the lungs and mucous membranes. He thought it a corrective of the stomach and intestines. After giving a cathartic he administered veratrum viride and digitalis in large doses. The pulse was sufficiently slowed. He discontinued the use of veratrum and gave strychnine and alcoholics; in severe cases, oxygen.

Dr. Meiere: Had never seen a double pneumonia recover. Expectorants had no effect but a harmful one. The object of treatment was to support life and

*Published in the November number.

stimulation had been his sheet anchor. He had seen good follow the application of antiphlogistine. In cyanotic conditions he used oxygen gas.

Dr. Hayes: Used cold sponges for the reduction of high temperature and alcoholics for stimulation.

Dr. Kitchen: Had been in the habit of using digitalis and strychnine as stimulants and had had highly satisfactory results from the use of antiphlogistine.

Dr. Magruder: Was a strong advocate of diaphoresis to reduce pyrexia and also as a method of treating the disease. As pneumonia is a self-limited disease, he thought that about all that could be done of value was to stimulate the heart and make the patient as comfortable as possible.

Dr. Cunningham spoke briefly of the advantages of diaphoresis as a method of treatment. He had never seen collapse from profuse sweating.

Dr. McKown spoke of the occurrence of malarial infection with pneumonia rendering the case more serious. He spoke favorably of ung. hydrargyri and blisters. He employed saline injections in severe cases. In some cases he would suggest the use of heat.

Dr. Pennock: Would like to endorse the use of profuse sweating. He uses strychnine, digitalis and sparteine as cardiac stimulants. He recommends the use of the ice poultice. Salicylic acid has produced good results.

Dr. Williams stated that the treatment in Canada does not differ essentially from that elsewhere.

The discussion was then closed and a few miscellaneous subjects, such as the

cause of the increased heart rate and high specific gravity of the urine in high altitudes spoken of.

Dr. Cohen invited the society to convene at his office at the next meeting, and the society adjourned.

B. B. FRANKLE, M. D.,
Secretary.

MEETING OF NOVEMBER 13, 1900.

The regular meeting of the Cripple Creek District Medical Society was held at the office of Dr. Cohen of Victor, with the following members present: Drs. Hereford, McKown, Pennock, Williams, McKenzie, Latimer, Cohen, Chamberlain, Kitchen, Hayes and Frankle. President Hereford called the meeting to order and the minutes of the preceding meeting were read and approved.

Under proposals for membership Dr. McKown proposed the name of Dr. S. S. Davis, and on motion of Dr. McKown the rules were suspended and Dr. Davis was elected by acclamation.

Under unfinished business an informal talk took place on the subject of the fee bill. Dr. Pennock moved that a committee of three be appointed to revise the old fee bill and report at the next meeting. President Hereford therefore appointed Drs. Pennock, Latimer and Gibbs to serve on this committee.

Dr. Cohen presented a case of hypospadias in a nine months old child for consideration.

Dr. Cohen then delivered an informal talk on the "Treatment of Gonorrhœa," as pursued in the clinic of Dr. Peterson of New York. He did not believe in

the abortive treatment and had seen bad results follow this course. He dwelt on the importance of hygiene, cleanliness, protection of the eyes, the avoidance of smoking and sexual excitement, and attention to the bowels. In anterior gonorrhœa a 1 per cent. solution of protargol is used during the purulent stage. In the subacute stage zinc iodide and zinc sulphate, one-half grain of each to the ounce, are used. The irrigation method was not approved of. Urotropin in doses of $7\frac{1}{2}$ grains three times daily was administered. A cure could be pronounced when no gonococci could be found on microscopical examination. In chronic anterior gonorrhœa nitrate of silver in 2 per cent. solution was applied locally and sounds used. In posterior urethritis nitrate of silver, oleo-stearate of zinc and massage of the prostate were used.

DISCUSSION.

Dr. McKown: Swabs out the urethra with a 40-grain to the ounce solution of nitrate of silver and follows with irrigation with permanganate of potash. He also uses methylene blue internally.

Dr. Pennock: Believes in acidifying the urine. Does not use alkalies.

Dr. Thomas: Treats gonorrhœa

without injections, depending on the oleo-resins.

Dr. Latimer: Uses sanmetto in addition to the ordinary methods.

Dr. Williams: Has seen permanganate of zinc do good service. In gonorrhœal ophthalmia he thought protargol very much inferior to silver nitrate.

Dr. Gibbs: Uses sulphate of zinc and hydrastis as injection, and salol internally.

Dr. Frankle: Uses irrigations with permanganate of potash and injections of 1 per cent. protargol solution. He also uses methylene blue internally.

Dr. Kitchen inquired into the effects of strong solutions of silver nitrate in producing stricture.

Dr. Davis: Uses the sound in the treatment of chronic gleet and local applications of nitrate of silver.

Dr. Chamberlain: Uses methylene blue internally, protargol by injection.

Dr. Hayes: Uses the oleo-resins, diuretics and acetanelide by injection.

Dr. Hereford: Has used protargol with good results.

Dr. Cohen then closed the discussion and the society adjourned to meet December 11 at the office of Dr. Chamberlain.

B. B. FRANKLE, M. D.,
Secretary.

Otero County Medical Society

This report appears in no other medical journal.

The Otero County Medical Society met in regular session in La Junta Tuesday, November 13, with the president, Dr. Frank Finney, in the chair. The members present were Drs. Arm-

is more admirable than, for example, Urinary Surgery, Colledge Physicians now to describe, an antero-posterior wine is the most valuable stimulant we showed later a longer febrile stage than to acid saltssuch as the hypophosphites cedure—the physicians or the W. C.

strong, Phillips, Ragsdale, Dow, Has-kins and Kearns of La Junta; Kirby and McDonald of Rocky Ford; and Reed of Fowler.

The subject for study was "Intestinal Obstructions," on which a paper was read, and two cases reported by Dr. Reed. Dr. Armstrong opened the discussion.

Dr. Dow reported a fatal case of epidemic cerebro-spinal meningitis of the hæmorrhagic type, occurring in La Junta.

Dr. Reed reported an interesting case

of stone in the bladder, and exhibited four large calculi removed therefrom, the largest one weighing five drachms.

Health Officer Dow of La Junta, presented an analysis of the water supply of the Arkansas river by the chemist of the State Board of Health, showing a condition of extreme hardness and abundant organic matter, but no typhoid bacilli, as was suspected.

The next meeting will be held in the court house in La Junta December 11, 1900.

The Pueblo County Medical Society

This report appears in no other medical journal.

Meeting of November 7, 1900.

The Pueblo County Medical Society met the evening of November 7, 1900, in the Central Block, President McLean in the chair. The minutes of the previous meeting were read and approved.

The membership committee reported favorably on the names of Drs. Josephine Nachtrieb and A. A. Ellis. They were elected to membership. Drs. Lee, Dyer, Hock and Randell were proposed for membership.

Paper of the evening by Dr. W. H. Baker. Subject, "Care of New-Born Child." It was discussed by Drs. Rice, Stoddard, Campbell, Marmaduke, Bullette, Black, Davis, Corwin, McDonald and MacLean. The discussion was closed by Dr. Baker.

Members present, 14.

Adjourned.

H. A. BLACK,
Secretary.

Meeting of November 20, 1900.

A regular meeting of the Pueblo County Medical Society was held at the Central Block Tuesday evening, November 20, 1900. President MacLean presided. Twelve members present.

Minutes of the last meeting read and approved.

The society decided that the literary committee be asked to explain why books have been purchased without the authority of the society.

On motion the society voted that the finance committee be authorized and instructed to procure a definite and final report from Dr. W. F. Singer, treasurer of the society, for the year of 1899.

The matter of irregular practitioners was placed before the society, and the same referred to the committee with instructions to investigate.

The paper of the evening was read by Dr. J. A. Black. Subject, "Some

Notes on Typhoid Fever." The discussion was participated in by the members present. Adjourned.

H. A. BLACK, Secretary.

Meeting of December 4, 1900.

A regular meeting was held Tuesday evening, December 4, 1900, with the president in the chair. Nine members present, and Dr. Griffin as guest.

Minutes of last meeting read and approved.

Committee on library reported since

inception of library receipts to the amount of \$251.70, and expenditures during the same period, \$261.11.

Treasurer Campbell reported receipts for the present year \$38.85, expenditures \$11.90. The treasurer was instructed to collect balance of dues and liquidate all bills against the society.

The paper of the evening was read by Dr. P. R. Thombs. Subject, "Nervous Difficulties Following Influenza." Discussed by members generally. Adjourned. H. A. BLACK, Secretary.

The Denver Clinical and Pathological Society.

This report appears in no other medical journal.

The regular meeting of the Denver Clinical and Pathological Society was held November 9, 1900, at the McPhee Building, the members being the guests of Drs. Jackson, Jayne, Edson, Lobingier and Stevens. The president, Dr. W. A. Jayne, presided.

The minutes of the previous meeting were read and approved with corrections.

Dr. Jayne, in a speech of acceptance of the office of president of the society, thanked the members for the honor conferred upon him. He also made a suggestion that the members consider the advisability of revising the constitution.

The committee on membership reported no vacancies.

Dr. E. W. Stevens proposed the name of Dr. G. W. Holden for membership.

The report of the treasurer, Dr. C. B. VanZant, for the last year, was read.

Receipts—

October 1, 1899, from former treasurer	\$42.26
From initiation and regular dues	86.00
	\$128.26

Expenditures—

For nine lunches	\$ 72.00
Sundries (stamps, bill heads, printing, etc.)	12.88
Floral tribute	10.00
	\$ 94.88
Balance on hand	33.38
	\$128.26

The report was accepted for the files. No new instruments or specimens were shown.

On motion of Dr. H. G. Wetherill, the courtesies of the floor and the hospitalities of the evening were extended

to our guests, Drs. Miller, Holden, Nagle and DeWees.

Dr. Bergtold reported a case of typhoid fever complicating chronic pulmonary tuberculosis, the temperature dropping by crisis on the twenty-third day with more marked improvement in the tubercular condition than had occurred for years. Discussed by Dr. Edson.

Dr. Packard reported a case of dislocation of the wrist uncomplicated by fracture. Discussed by Drs. L. Freeman, Beggs, Childs, Hall, Miller, Warren, Powers and the president.

Dr. L. Freeman spoke in condemnation of craniotomy for microcephalus, it failing in permanent results. Discussed by Dr. Miller.

Dr. VanZant reported some observations on the effect of salol on the diazo-reaction in typhoid fever, the effect of the salol being to prevent the reaction.

Dr. Black reported a case of obstinate secondary hemorrhage following the excision of a tonsil in a tubercular

patient. The usual treatment not being followed by much result, an application of suprarenal extract was made, followed by transfusion of one quart of normal salt solution in the breasts. No further hemorrhage resulted. Discussed by Drs. Stover, Gallaher, Lobingier, Waxham and Miller.

Dr. Hall reported a case of vaginitis with exudate, at first supposed to be diphtheria, but which proved to be due to the colon bacillus. Discussed by Drs. McNaught, Fleming, Warren and Jackson.

Dr. Jackson spoke on measurement of exophthalmus and exhibited a scale for measurement of the same. Discussed by Drs. Black and Bergtold.

Dr. Jackson moved that a committee of three be appointed by the chair to consider the suggestions of the president relative to a revision of the constitution and by-laws. Carried.

No further business appearing, the society adjourned.

Members present, 30; visitors, 4.

F. W. KENNEY, M. D., Secretary.

The Denver and Arapahoe Medical Society

This report appears in no other medical journal.

The regular meeting of the Denver and Arapahoe Medical Society was held at the Brown Palace Hotel the evening of October 3, 1900. Vice president Wethrill in the chair.

The minutes of the last meeting were read and approved.

Dr. C. S. Nagel, of the University of Berlin, was proposed for membership by Drs. Stover and Lobingier.

The board of censors having reported favorably on Drs. Roy Ingles, J. S. Miller and Donald Kennedy, they were admitted to membership.

The regular scientific program was carried out.

Dr. J. N. Hall gave a ten minutes address on euteroptosis.

Dr. Waxham read the first paper, entitled "Mycosis of the Throat."*

*Published on page 515.

DISCUSSION.

Dr. Gallaher: Mr. President and Gentlemen of the Society—I am very glad this disease was brought to the attention of the society this evening, as I believe no age is exempt from this infection. One peculiarity which has impressed me is the power of penetration which the leptothrix possesses, burrowing down to the glandular substance. It is due to its deep seat that we obtain such poor results in our treatment. The symptoms are most amazing. I believe the fungus grows best in an acid medium, therefore we make the saliva as alkaline as possible, using magnesium and similar alkaline washes. Our further treatment consists in using the galvano cautery, passing the needle into the deep substance. Each tuft should be separately cauterized. I believe that bicarbonate of soda is especially valuable when combined with formalin. I think in time the cautery will cure, but it is very tedious.

Dr. Levy: Mr. President and Gentlemen—This subject has been very carefully reviewed by Drs. Waxham and Gallaher. As an etiological factor the acidity of the secretions is to be most strongly borne in mind, and it should go further to enquire the cause of this acidity. The decomposition of food is often great enough to color litmus paper by its acid production. I have found that patients having mycosis very often have some digestive disturbance; this, in fact, is a very common occurrence, as the regurgitating acid secretions permit the pharynx to become a suitable nidus for the fungus.

For diagnosis we depend greatly

upon the microscope. It has been proven that the leptothrix has been found in the mouth and the subject has not had mycosis. The fungus has a peculiar formation of deposits, which in themselves simulate thread. There are but two diseases, diphtheria and mycosis, that have actual deposits. In ordinary follicular tonsillitis, the crypts can be rubbed free of all growths without bleeding, but in mycosis this cannot be done.

As regards treatment, the most advisable thing to do is to correct the digestive disturbance and convert the acidity of the saliva into an alkaline secretion. Dr. Black sent me a case and suggested a remedy that I had never heard of before. The patient had used every known medicine without relief, as the growth persistently returned; finally, as he did not smoke, Dr. Black suggested his using tobacco. The patient started to smoke, with the result that the disease entirely disappeared. I should recommend tobacco in obstinate cases.

Dr. Stover: The question occurs to me whether this fungus grows in the oesophagus and stomach or not, as I have no recollection of ever reading that it did.

No answer was given to Dr. Stover's question.

Dr. A. M. Holmes read a paper on "Some Problems Pertaining to Tuberculosis." Discussed by Drs. Simon, Tyler, and discussion closed by Dr. Holmes.

Dr. Stover asked permission to collect dues and arrears. Dr. Tyler moved

that the permission be granted—which was done.

The resignations of Drs. Harvey and Whitehead were accepted; the secretary being instructed to express the regret

of the society to Dr. Whitehead.

There being no further business, the meeting adjourned.

C. P. CONROY, Secretary.

Colorado Medical Library Association

DEVOTED TO

THE INTERESTS OF MEDICAL LIBRARIES IN THE WEST.

HENRY SEWALL, M. D., President

CARROLL EDSON, M. D., Secretary

LAURA LIEBHARDT, M. D., Treasurer.

CHAS. R. DUDLEY, Librarian

No. 22. December, 1900.

This report appears in no other medical journal.

Owing to the tremendous amount of labor necessary to recatalog all the books of the combined libraries, it has been hard to give the time really needed to attend to the medical department properly, but as the work of cataloging nears completion, we hope to have the medical work done and kept up-to-date. However, do not think for an instant that the medical library has been at a standstill during the past year; on the contrary, it has grown considerably.

There have been accessioned since the first of 1900 about 120 bound journals, and about 240 books. Nearly 60 bound reports and transactions and about 150 unbound reports and transactions have been received.

There are also, not accessioned, pretty nearly 200 bound volumes of journals which were given by Dr. John Boice.

The valuable collection of books left to the library by the late Dr. E. R. Ax-tell has added materially to the number of accessions.

For current medical journals during

this year the library is indebted to Drs. Hawkins, Fish, Hall, Eskridge, Taus-sig, Zederbaum, Mann, Edson, Lemen, Taylor, Fleming, Anderson and Rivers for a generous supply.

Last month the Denver Chemical Manufacturing Company sent the library about 200 pounds of medical journals. These will undoubtedly complete many of the files.

The following books have recently been added to the medical department by the public library: 3 volumes of Saunders' Medical Atlases, including "Internal Medicine and Clinical Diagnosis," by Jakob; "Syphilis and the Venereal Diseases," by Mracek; and "Diseases of the Skin," by Mracek; Weyl's "Handbuch der Hygiene, vol. 9; Hare's "Practical Diagnosis;" and the 19th and 20th volumes of the "Twentieth Century Practice," which complete the set, the 20th volume containing the general index. The new edition of the "Reference Handbook of the Medical Sciences" has been ordered for the library. So this hasn't been such a bad year for the association after all.

ZOE GUERNSEY.

EXCHANGES

Antero-Posterior Sub-division of the Bladder. The *Journal of Cutaneous and Genito Urinary Diseases*, for December, records the following contribution by Dr. Eugene Fuller, Professor of Urinary Diseases and Genito-Urinary Surgery, College Physicians and Surgeons, New York City, on Antero-Posterior Sub-Division of the Bladder; an Important Anomaly.

Aside from exstrophy and patency of the urachus, defects directly dependent on arrests in fetal development, anomalies of the bladder are infrequent. Lateral sub-division, caused by a complete or partial median partition, has been reported on a number of occasions. In such instances one may also expect the urethra to be divided, each vesical sub-division being supplied with a separate canal and a single ureteral opening. On a very few occasions, where more than two ureters have existed, a similar separate vesical division for each ureteral opening has been observed. Vesical pouches of various descriptions, both congenital and acquired, are of comparative frequency. As far as I am aware, however, the anomaly I am now to describe, an antero-posterior sub-division due to a nearly complete transverse partition, has never heretofore been reported; and what adds to the completeness of this report are the facts that I have encountered two similar instances, have studied them clinically, and in one of them I have been able to secure the bladder post-mortem.

In both these instances the trans-

verse partition lay anterior to the ureteral openings so that all the urine first entered the posterior vesical chamber. The anterior chambers were small, about an ounce to an ounce and a half in capacity, with rigid walls, while the posterior ones were roomy and distensible, comparing closely in those respects with the natural vesical cavity. In the upper middle portion of each partition was an aperture connecting the two chambers. The first case had the larger aperture, which was oval and capable of admitting at once the tips of the fore and second finger. The vertical diameter was the smaller. The distance from the base of the bladder to the lower margin of the aperture was nearly an inch. The distance from the superior margin of the aperture upward to the bladder was very slight. In the second case the aperture was so narrow that it could admit the tip only of the forefinger and was circular in outline. In this instance the complete vesical cavity resembled that of an hour-glass, except that the posterior vesical chamber was much larger than the anterior. In this case also the distance from the base of the bladder to the lower margin of the aperture was very much greater than that from the upper margin of the aperture to the superior wall of the bladder. In both instances the partition was very thick, resembling closely in that respect what would be represented by a double thickness of hypertrophied vesical wall. In fact, it seems to me as if the vesical anomaly

I am now describing might be quite closely imitated by taking a normal bladder partially distended and tying about it transversely and just anteriorly to the ureteral orifices a fine stout cord sufficiently tight to produce a constriction such as has been described. In the second instance the cavity of the anterior chamber was irregularly spanned by numerous fine fleshy columns, which seemed to bear a resemblance to the columnæ carneæ of the heart.

When I encountered the first of these anomalies I thought it might be an example of what Guthrie mentioned in his "Urinary and Sexual Anatomy," London, 1843, where a vesical pouch forms behind the firm transverse band of muscular fibers constituting the posterior limit of the trigonum. The condition, however, which Guthrie described evidently does not apply to the condition under consideration, as the following quotation, which constitutes what he had to say on the subject, shows. It is as follows: "Posterior to the base of the triangular space the coats of the bladder are usually thin, although the transverse bands of muscular fibers are more strongly marked, passing across like strong distinct cords, and sometimes running in an oval direction. The greater thinness of the bladder and the direction of its fibers admit of a hollow being formed at this part in which a stone may lie and remain sometimes undiscovered on sounding for it."

The plague has gained more than a foothold in Mauritius. During the first week in November there were 50 new cases and 35 deaths.

Treatment Dr. Alfred Stengel, Professor of Clinical Diseases of Typhoid Fever, in the University of Pennsylvania, contributes to the November number of the *Pennsylvania Medical Journal* a review of the treatment of typhoid fever.

The demonstration that there is no specific drug treatment for typhoid fever might occupy more time than I have at my disposal for the entire discussion, and I shall therefore content myself with having stated the above propositions in a dogmatic fashion.

Beginning with the admission that there is no specific remedy, we recognize our limitations in the matter of treating this disease. It is possible only to support the system, to obviate complications, to control fever, nervous manifestations, and certain other symptoms that may become excessive, and thus aid nature in combating the infection and its products. It is impossible, in the limits of this discussion, to touch upon each branch of treatment, and I shall content myself with referring briefly to important points.

First, the support of the system. Various remedies have been suggested from time to time, and various forms of diet, etc. With the question of diet I have nothing to do in this place. Granted a proper diet, the most powerful therapeutic measure for the stimulation and support of the system is found in the application of some form of hydrotherapy. Cold water has been used for centuries in the treatment of fevers, and though Currie and some others properly receive the credit of having urged the use of water, the modern

bath treatment has come entirely from the suggestion of Brand of Stettin. The evidences in favor of the life-saving power of this bath treatment are overwhelming. The unbiased reader cannot fail to recognize the reduction in mortality that has been the immediate result of this treatment whenever it has been honestly employed. It is important, however, to recognize that the bath treatment is not invariably applicable. Under certain circumstances it cannot be carried out; in certain conditions it is not advisable; sometimes it must be abandoned after it has been instituted. It would be as absurd to urge this as an invariable treatment as it would be absurd to insist upon any other form of non-specific treatment of disease as a routine practice. In my own experience in hospital practice, the Brand treatment has been used almost invariably, though a number of cases have been treated otherwise. The attempt has been made to "tub" in a rational way and not blindly. The results in the series of cases to date have been satisfactory as far as figures can indicate. Of 196 cases, 9 died; a mortality of 4.6 per cent. These figures are obtained from the University Hospital and refer to cases under my own supervision. In the other hospitals in which I have served (the Howard, the Philadelphia Hospital, the Children's Hospital) the same practice of bathing in selected cases has been followed, and the results have been satisfactory as far as judgment based upon small numbers of cases can be relied upon.

Next to bathing, medicinal cardiac stimulants deserve attention. The hydrotherapeutic method of treatment undoubtedly lessens the tendency to exhaustion and the typhoid state. Low muttering delirium, excessive dryness of the tongue, subsultus, bed-sores, and other evidences of extreme depression of vitality have become very exceptional instead of being, as formerly, quite frequent. Notwithstanding this, however, medicinal stimulation is necessary in some cases, as the cardiac power does sometimes prove inadequate in spite of the stimulating effect of the cold bath. Under these circumstances, alcohol in the form of whisky or brandy or as champagne or other wine is the most valuable stimulant we possess. I am convinced, however, that it is administered more often than is required, and that sometimes this is done to the detriment of the patient, while it is very frequently unpleasant. Excepting in the very weak, in the aged, and in those who have been accustomed to regular drinking, alcohol should not be used until the first heart sound shows evidence of weakness, the pulse grows feeble, or the nervous symptoms indicate a loss of systematic tone. When these indications are present, alcohol should always be given at once, but its administration should be cautious and sparing. Two to four drachms of brandy or whisky or a corresponding amount of wine every two or three hours is sufficient for cases of moderate severity, and sometimes a smaller quantity is sufficient. In emergencies larger amounts may be required, and

sometimes as much as an ounce must be given every hour for several hours in succession, or perhaps even for longer periods, but I do not believe that patients are saved by the enormous quantity of alcohol sometimes referred to as having been required to save life. When six or eight ounces in twenty-four hours are insufficient to avert cardiac failure or general exhaustion, larger quantities will not accomplish the desired result. In such cases it is better to supplement the alcohol with other forms of stimulation. Strychnine has been extensively used and is undoubtedly most valuable. In a certain way it may be more supporting than alcohol, though it lacks the food value of the latter. As a rule, I prefer to use it in conjunction with alcohol, giving small or moderate doses of each alternately rather than large doses of either—1-60 or 1-30 of a grain of sulphate of strychnine four times daily, with two or three ounces of brandy or whisky per diem in divided doses, suffices in ordinary cases. Occasionally, 1-20 of a grain five times daily is advisable, but larger doses seem to me of questionable utility and are possibly capable of doing harm.

In some cases of typhoid fever, excessive diarrhoea, tympany and other causes may contribute to produce extreme depression for which the maximum of stimulation is required. In such instances, after alcohol has been pushed to the limit of safety and strychnine has been administered as freely as seems advisable, something additional is required, or we find that ex-

cessive nervousness of the patient makes a withdrawal of the strychnine desirable. Under these circumstances I know of no cardiac stimulant equal in efficiency to camphor. First advocated by von Ziemssen, injections of camphorated oil have been extensively used in Europe, but have never found much favor in this country, or at least have been little employed. One grain of camphor dissolved in fifteen minims of sterile olive oil may be injected under the skin without pain and with very rarely any unpleasant consequences, such as indurations or abscesses. The oil is quickly absorbed, and the stimulation is prompt and continuous. I have used as much as one-half to one or two grains every second hour for several days, but as a rule have not lessened the interval between the injections below four hours. This drug commends itself particularly on account of the quieting effect on the nervous system—unlike alcohol or strychnine in this respect. In addition it has proved useful in cases in which obstinate hiccup has occurred; and several times this same system in diseases other than typhoid has yielded to injections of camphorated oil when all other remedies have failed.

I have but a few words to say regarding the specific serum treatment of the disease. This has been studied clinically and experimentally, but thus far no useful results have been reached. The prophylactic injections of Wright are promising, though no positive opinion may be expressed. It is certain that no curative serum has been thus far produced.

It is impossible, in the limits of this discussion, to consider, even briefly, various complications that may require treatment; but before closing I wish to express the conviction that a great deal of medicinal treatment can be avoided in typhoid fever if the feeding of the patient is wisely conducted.

The State Board of Health has submitted its annual report to the governor before sending it to press. There have been 5,608 deaths in the state during the nine months from January 1 to Oct. 1, 1900, 1,012 of the dead being infants less than 1 year old. There were 117 deaths of people between 80 and 90 years of age.

The table of sexes shows that there were 3,379 deaths of males and 2,229 deaths of females in the nine months.

While the report nominally is for the past two years, it really covers the last eight years, no report having been published from 1893 to the present time.

There is a significant increase in the number of suicides. They have almost doubled in the last five years. There have been twenty-two definite cases of suicide by poisoning during the past nine months, and several scores of suspicious deaths. Four have killed themselves by strangulation, nineteen by drowning, five by firearms and one by knife.

The report dwells extensively on contagious diseases and mentions its successful efforts to prevent the introduction of the bubonic plague into Colorado.

Thirty-seven cases of yellow fever were reported in Havana December 4.

THE DOCTOR'S GUESS.

Lawyer Chapman of Los Angeles was once associated with Senator Stephen M. White in a certain case. Chapman loves a good dinner, and one day, just before the big case was to come up in court, he ate more than he ought. The next day he was sick, and White took a doctor around to see him. Chapman was groaning with pain, and the doctor was puzzled. At last the doctor noticed a red spot on Chapman's cheekbone, and came to the conclusion that Chapman needed a dentist, and told him so:

"You have an ulcerated tooth. That's what ails you."

Chapman quit groaning long enough to turn to his wife and say:

"Just hand me my plates off the bureau so I can see which one of those miserable teeth is aching."—*New England Magazine*.

Ft. Collins, Colo., is having an epidemic of typhoid fever, two hundred patients having been reported up to December 3. Dr. W. C. Mitchell, the state board of health bacteriologist, was sent to make an investigation of the cause of the epidemic, and to take steps looking to the restriction of its spread.

Dr. Edward A. Ross, for seven years head of the department of economics and sociology at Leland Stanford University, has been elected associate member of the International Sociological Institute at Paris. He makes the sixth member of this society in the United States.

NEWS ITEMS

The birth rate in Berlin as well as in France is on the decline.

Two new cases of the plague were reported in Alexandria, Egypt, November 13.

Yellow fever is raging in the town of Leon, Nicaragua, and is of a very severe type.

The United States supreme court has decided that states have the power to regulate the sale of cigarettes.

The last of the Glasgow plague patients was discharged November 3. The epidemic cost the city \$5,000,000.

The new building of the D. & R. G. R. R. hospital at Salida, Colo., is nearing completion. The cost will probably reach \$45,000.

Manchester has been having an epidemic of arsenical poisoning. It was found to be due to the beer, a contaminated glucose having been used.

Florence, Colo., is to have an eight-room town hospital, and a four-room detention hospital, the County Commissioners having decided to build them.

The schools of Districts Nos. 10 and 27 (the latter including the town of Brighton) have been closed on account of diphtheria, and will remain closed until the disease can be checked.

The following have been elected the local board of managers of the National Jewish hospital for consumptives: Alfred Muller, Rabbi William S. Friedman, David May, L. Gutman, N. Friedman, William Weil and L. Anfenger.

The Denver health commissioner is reported to have been collecting evidence against L. C. Greenlee, superintendent of School District No. 2, for refusing to obey the regulations of the city health department, he refusing to report smallpox and other contagious diseases.

The board of health of Columbus, O., has begun the weekly medical inspection of prostitutes. The contract physicians who have been making such examinations for some of the houses of prostitution are objecting on the ground that it interferes with their practice.

Swen A. L. Thompson, an osteopath, was fined \$50 and costs in the police court at Milwaukee recently for violating the Wisconsin laws regulating the practice of medicine, he having used the title "Dr." without having received a license from the state board of medical examiners.

In France it is proposed to tax all celibates above certain age, and all childless couples who have been married more than five years. The object is to promote an increased birth rate.

It will fail, however, for it would not be possible to impose a tax sufficiently high to make the avoidance of the tax desirable from a simply financial standpoint.

An excellent lesson, but a rather expensive one, on the disadvantages of contaminated drinking water is now being given to the town of Cementon, Pa. The population consists of 200 families, and typhoid fever is present in 118 of these, in 22 of the families all the members being affected. The water supply is drawn from the contaminated Lehigh river.

St. Clair's Orphanage contains 115 children. The following are the officers for the coming year: Rev. Richard E. Sykes, president; Rev. William O'Ryan, first vice president; Rabbi William S. Friedman, second vice president; Mrs. A. G. Rhodes, third vice president; Mrs. S. Izetta George, secretary; Mrs. Irene Davenport, registrar; E. S. Irish, treasurer; Thomas Keely, S. M. Allen, W. N. Spalding, T. A. Uzzell and R. N. Golden, trustees.

Grand Rapids is stirred up over the Dowieites and a movement to exterminate them is on foot. Recently, after a lingering illness, Mr. McBain, a citizen of that city, died from a complication of diseases. The doctors gave him up three weeks previous to death. Mrs. Coreyll, mother-in-law of the deceased, is a Dowie believer and influenced her daughter to give over the patient to the "healers." The body

was worked over several days, and each evening it was announced that the man was recovering. Death suddenly came, and then the "healer" requested that the body be left in its present death-bed state, as he would "rise" during the night. His request was granted by the frantic widow, who was willing to rest upon the hope that her husband would be restored to her. Later a brother-in-law, learning that the body, after being dead many hours, was not being properly cared for, called for an undertaker and ordered the healer off the premises.

The Southern Colorado Medical Association has been organized with the following officers: President, Dr. T. B. Moore of Canon City; first vice-president, Dr. Will B. Davis of Pueblo; second vice-president, Dr. P. R. Thombs, Pueblo; secretary, Dr. C. F. Taylor, Pueblo; treasurer, Dr. J. A. Black, Pueblo. The society has for its purposes purely scientific and professional research. Social gatherings of any kind are expressly prohibited by the constitution. A meeting will be held twice a year, and in order that the association may accomplish the result of closer contact sessions shall not be held in the same city twice within five years. The first regular meeting of the organized association will be held in Pueblo on the second Tuesday in May next. Arrangements and programme for that meeting were entrusted to Drs. Thombs, Davis and Stoddard of Pueblo.

The monthly meteorological summary for the month of November was

reau. The mean barometric pressure was 30.19 and the mean temperature 42, the highest being 74 degrees and the lowest 42 degrees. There was an excess of 3 degrees on the average. The accumulated excess of temperature since January 1 was 580 degrees. The prevailing direction of the wind was south with a maximum velocity of 46 miles. The precipitation was .37 inch, a deficiency for the month of .21 inch. The number of clear days was 14, partly cloudy 11 and cloudy 5. The mean relative humidity of the month was 39.2. The hours of sunshine were 223 out of possible 300 hours.

The weather bureau of Denver has issued a record for the month of December covering the average weather for a period of twenty-eight years, as follows: Temperature—Mean, 32 degrees; warmest month, 1889, average of 40 degrees; coldest month, 1878, average 22 degrees; highest temperature, 74 on December 2, 1885; lowest, 25, on December 24, 1876; average first killing frost, October 6; average of spring killing frost, May 9.

Precipitation — Monthly average, .66; average of days with .01 of an inch or more, 5; greatest monthly, 2.32 inches in 1883; least was none in 1881; greatest recorded in twenty-four consecutive hours, 1.75, on December 5 and 6, 1883; greatest snowfall, 6.9 inches, December 24 and 25, 1891.

Clouds and weather—Average clear days 15; partly cloudy 13; cloudy, 3. Winds, prevailing from south; highest velocity, 60 miles, from the northwest, on December 4, in 1877, and December 30, 1895.

During the month just closed there have been 175 entirely new cases of infectious and contagious diseases within the Denver city limits, according to the statistic of the health commissioner's office compiled December 8. This is at the rate of nearly six a day for the entire thirty days.

That there, has been an epidemic particularly in scarlet fever and chicken pox, cannot be questioned. The wonder is that the department with its limited funds and small force has been able to cope at all with the maladies. Here are the October and November reports for 1900 and 1899:

	1900		1899	
	Nov.	Oct.	Nov.	Oct.
Scarlet fever.....	80	55	76	23
Diphtheria	19	26	32	26
Measles	9	2	13	2
Typhoid fever.....	17	30	21	37
Smallpox	22	19	1	..
Whooping cough....	3	..	6	..
Erysipelas	8	4	..	..
Chicken pox.....	17	12	..	..

It was owing to the continued and alarming presence of scarlet fever that Dr. Henry of the department was detailed several weeks ago to devote his entire attention to contagious diseases among school children. The enormous increase in scarlet fever cases, 25 more than in October, which was considered a very bad month itself, had its inception chiefly in Grant Ave., and Grant schools. Proper precautions were not taken by the parents of children and the disease gained a stronghold before the health department could obtain control of the situation.

By way of contrast to the conditions of November, 1899, just one year ago,

when all superintendents were assisting the department in its efforts to stamp out disease, the following is shown from Dr. Carlin's report of that month:

"On account of the prevalence in the city of scarlet fever it became necessary to make personal inspection of some of the schools and to issue orders for the exclusion from the schools of all children suffering from sore throat. This order has been faithfully carried out by superintendents and teachers all over the city. The wisdom of this course have been amply shown by the already marked reduction in the number of scarlet fever cases reported."

THE CRAIG COLONY PRIZE FOR ORIGINAL
RESEARCH IN EPILEPSY.

Dr. Frederick Peterson, president of the board of managers of the Craig Colony for Epileptics, at Sonyea, N. Y., offers a prize of \$200 for the best original unpublished contribution to the pathology and treatment of epilepsy. Originality is the main condition. All manuscript should be submitted in English. The prize is open to universal competition. Each essay must be accompanied by a sealed envelope, containing the name and address of the author and bearing upon the outside a motto or device, which is to be inscribed also upon the essay. All papers received will be submitted to a committee, consisting of three members of the New York Neurological Society, and the award will be made upon its recommendation at the annual meeting of the Board of Managers of the Craig Colony, October 8, 1901.

Manuscripts should be sent to Dr. Frederick Peterson, 4 West Fiftieth street, New York City, on or before September 30, 1901. The successful essay becomes the property of the Craig Colony, and will be published in its annual report.

"CHICAGO CHLOROFORM."

The practice of injecting cocaine within the meninges of the spinal cord has already been designated by a remarkable number of names. Some of them are the following: "Spinal-canal cocainization," "cocaine analgesia from subarachnoid injection," "intra-spinal cocainization," "subarachnoid injections of cocaine," "intradural injections of cocaine," "endomeningeal spinal cocainization," "medullary injections," "subarachnoid cocainization," the "subdural infiltration method," "subarachnoidean injections," "medullary narcosis," "Corning's method of medullary narcosis," the "spinal subarachnoid method," and (from what evolved we cannot imagine) "Chicago chloroform."—*New York Medical Journal*.

A case of death from suspected yellow fever has been reported from Natches, Miss.

Mrs. Frank Gramelli, aet. 26, of Pueblo, Colo., gave birth to triplets November 19. The largest, a girl, weighed 6¼ pounds, the others, boys, weighing 5 pounds and five pounds and 3 ounces, respectively. The woman was already the mother of five children.

Another cure for consumption is being given free advertising by the newspapers, which consistently oppose all laws to properly regulate medical practice as interfering with their paid advertising. This time it is a prescription of Hoff of Vienna. It is as follows:

R.

Acid arseniosa.....	.1
Acid cinnamici.....	.3
Kalii carbonatis depur.....	.2
Aquae distillatae	50.
M. Ft. sol, et ade cognac..	25.

M. Sig. Take after meals according to instructions of physician.

And still they come.

Warning is apparent upon the face of a physician's certificate filed with the health department recently by Dr. J. P. Willard, who treated William Ernest Burgess, 27 years old, who was employed in the East as clerk for a railroad. The cause of death, Dr. Willard says, was pulmonary tuberculosis and the contributing cause "too close confinement in business." Mr. Burgess died in the Homeopathic hospital after an illness of 18 months.

Dr. P. Hyrup-Pederson of Laramie, Wyo., formerly of Denver, has been appointed a member of the auxiliary committee of the Pan-American Congress of Physicians, to meet in Havana December 26.

Mrs. Alvina Taylor renounced her faith in Christian Science and is under the care of the physicians of the county

hospital. She is a widow, a dressmaker and has lived for some time by herself in the rear of 1124 Lawrence street. Recently she was taken ill with heart disease, suffering so acutely she could not lie down. A leg also swelled to great proportions. She followed Christian Science treatment but did not improve, and the neighbors notified County Physician Brown.

Miss Clarissa Sayre Newcombe and Dr. Henry Forest Hoffman were married at the home of the bride's mother, Mrs. J. M. Newcombe, 3317 Clay street, November 13. Dr. and Mrs. Hoffman have gone on an extended trip.

PARENTAL RELATIONS.

One of the teachers in the Sunday school of the First Methodist Episcopal church of Germantown was endeavoring to instill into the little girls of her class recently a due appreciation of parental affection. She spoke of the mother's love for her children and of the respect which the children should show to the mother. For some reason she rather omitted to lay as much stress upon the father. Finally one of the little girls remarked that she thought children should love their mothers much more than their fathers.

"Why do you think that?" asked the teacher.

"Oh, well," said the little tot, "your fathers are only related to you by marriage, but your mothers are related to you by hornation!"—*Philadelphia Record*.

BOOK REVIEWS

PROGRESSIVE MEDICINE. A quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, etc., assisted by H. R. M. Landis, M. D., Assistant Physician to the Out-Patient Medical Department of the Jefferson Medical College Hospital. Vol. IV. December, 1900. Diseases of the Digestive Tract and Allied Organs, the Liver, Pancreas, and Peritoneum; Genito-Urinary Diseases and Syphilis; Fractures, Dislocations and Amputations, Surgery of the Extremities, and Orthopaedics; Diseases of the Kidneys; Physiology; Hygiene; Practical Therapeutic Referendum. 424 pages, with 69 illustrations. Price for the year, \$10. Lea Bros & Co., Philadelphia and New York.

This is the closing volume of this most excellent publication for the year. No backward step is taken in it. If anything, it is rather superior to the preceding numbers.

Max Einhorn, M. D., professor of medicine in the New York Post-Graduate Medical School, gives a careful collation of the literature for the year on diseases of the stomach and allied organs, the liver, pancreas, and peritoneum. In the case of the stomach he discusses the advances in the methods of treatment and diagnosis, in which we can simply mention the new instruments for gastric douche and the application of powdered drugs. Of special interest may be mentioned only the subjects of

the significance of mould in the stomach, and floating liver and its clinical significance.

William T. Belfield, M. D., associate professor in surgery in Rush Medical College, covers very well in the 24 pages devoted to that subject the recent contributions to the literature of genito-urinary diseases and syphilis.

To ask for a better resume of the subject of fractures, dislocations, amputations, and surgery of the extremities and orthopaedics than is given by Joseph C. Bloodgood, M. D., associate in surgery in Johns Hopkins University, one would have to be very hypercritical. The nature and treatment of surgical shock is the opening subject, and the recent additions to our knowledge are well elucidated. Following this, and closely connected with it, we have the subject of blood examinations in their practical relations to operative surgery, and due weight is given to Mikulicz's rule to never operate on a patient whose haemoglobin is under 30 per cent, and Hamilton Fish's opinion that a general anaesthetic should never be given to a patient whose blood presents a haemoglobin percentage of 50 or less. Of great interest are the discussions of the subjects of the haemostatic uses of gelatine, gas bacillus infection, the serum treatment of tetanus, fractures at the elbow joint, coxa vara, gonorrhoeal arthritis, arthropathies associated with nervous lesions, and tuberculosis of the bones and joints.

John Rose Bradford, M. D., F. R. C.

P., professor of materia medica and therapeutics in the University College, London, follows with a well-chosen analysis of the recent literature on the subject of diseases of the kidneys. That part relating to the secretion of the kidneys and the nature of uraemia is specially important.

Not enough space has been given to the subject of physiology, which, otherwise, has been well handled by Albert P. Brubaker, M. D., adjunct professor of physiology and hygiene in the Jefferson Medical College.

The section of Hygiene by Henry B. Baker, M. D., of the Michigan State Board of Health, is one which it would amply repay any practitioner to read. The subjects of the causation of diseases, the spreading of diseases (in which special attention is given to the role of the mosquito in the spread of malaria), the principal modes by which the ordinary communicable diseases are contracted, and the best measures for the avoidance, for the restriction, and for the prevention of diseases are briefly but well presented.

The last section is a very valuable practical therapeutic referendium by E. Q. Thornton, M. D., demonstrator in therapeutics in Jefferson Medical College. In 100 pages this presents the newer remedies and their therapeutics as well as some additions to our knowledge of some of the older members of our therapeutic armamentarium. It cannot help being of value to any practitioner, no matter how great his facilities for therapeutic learning and his

industry in what is really the aim and object of medical practice.

PHYSICIAN'S MANUAL OF THERAPEUTICS. Referring especially to the Products of the Pharmaceutical and Biological Laboratories of Parke, Davis & Company, Detroit, Mich. This little manual contains 513 pages.

The first 39 are devoted to therapeutic suggestions, consisting of an index of diseases and symptoms and the remedies suggested for them. This is followed by tables of antidotes for poisons, differential diagnosis of eruptive fevers, equivalents of weights and measures, equivalents of imperial measure units, approximate measures, and table of thermometric equivalents. Then come 458 pages devoted to materia medica. In these the various preparations are given alphabetically and explanatory notes given whenever deemed advisable. The work is a very convenient one, and admirably subserves the purpose indicated in the preface of "placing before the prescriber a means of perceiving at a glance all the available forms of pharmaceutical preparations of any drug now in vogue."

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS. A manual for the use of Physicians, Surgeons and Students. By Charles W. Purdy, LL. D., M. D., Queens University, Fellow of the Royal College of Physicians and Surgeons, Kingston, Canada; Professor of Clinical Medicine at the Chicago Post-Graduate Medical School. Author of "Bright's Diseases and Allied Affections of the Kidneys;" also of "Diabetes; its

Causes, Symptoms and Treatment." Fifth Revised and Enlarged Edition, With numerous illustrations, including photo-engravings, colored plates and tables for estimating total solids from specific gravity, chlorides, phosphates, sulphates, albumin reaction of proteids, sugar, etc., in urine. 6x9 inches. Pages xvi—406. Extra cloth, \$3, net. F. A. Davis Company, publishers, 1914-16 Cherry street, Philadelphia.

The first edition of this work appeared in 1894. The appearance of the fifth in such a comparatively short time for a work of this class is a speaking evidence of its value. The changes made since the last edition was published have not been very numerous but are all in the way of advances.

The necessity for a more careful study of the urine in disease than is probably far too frequently done is indicated in the following sentence from the opening chapter, which treats of the physical characters of the urine. "While it is impossible to diagnosticate all diseases from the urine, it is, nevertheless, true that no serious disease can be in progress in the economy without giving rise to more or less marked changes in the character of the urine."

The second section, of some 46 pages, is devoted to the consideration of the normal constituents of the urine. Their chemical and physiological properties, the meaning of their variations from the normal amount and the several tests of practical use for their determination qualitatively and quantitatively are expounded briefly and lucidly.

The portion devoted to the abnormal constituents of the urine is naturally

much more extensive, occupying 150 pages. Considerable care and attention are devoted to the methods of determining the presence of the various pathological constituents which may be present, as well as defining the inferences to be drawn from their presence. The centrifugal method of quantitative analysis has been quite profitably extended. An entirely new chapter on the microscope in its relations to the subject of the work has been added.

A section of special interest is that on urinary diagnosis. In it are discussed the various diseases in which the characteristics of the urine are of direct diagnostic value. It is followed by an appendix on examination of urine for life insurance. This is of value to others besides life insurance examiners as it gives a sort of a guide-post of the indications furnished for further investigations.

This work has already, in its earlier editions, gained for itself a position as a standard. The reputation of the previous editions will only be increased by this. The student and practitioner will alike find it a very valuable instructor.

PRACTICAL GYNECOLOGY. A comprehensive text-book for Students and Physicians by E. E. Montgomery, M. D., Professor of Gynecology, Jefferson Medical College, etc. 819 pages, illustrated. P. Blakiston's Son & Co., Philadelphia, Pa. Price \$5.

As a text and reference book in gynecology this work is worthy of cordial commendation. Its arrangement is admirable and it covers the subject

in a satisfactory way. It is free from the great mass of obsolete and abandoned teaching with which so many recent books upon the subject are padded and which only serves to confuse the student and practitioner, and at the present day has no place excepting in a history of the subject. Gynecology has advanced with great rapidity, its theory and practice have been simplified and vastly improved from year to year and rare good judgment must be exercised in selecting the material for a live, up-to-date, eclectic text-book; but the author of this little volume has certainly approached the ideal in this particular. Many of the illustrations are new and all are good from the standpoint of workmanship and as aids to a more perfect understanding of the text. In the sections of anatomy and plastic surgery the illustrations are particularly helpful, those depicting the various methods of repair of the vaginal outlet deserving special mention. Perhaps just here too much attention has been given to the unusual methods, knowing as we do, that the vast majority of this work is done by one of the four methods spoken of in the last paragraph of this section under the head "Choice of Operations."

Taken as a whole the teaching of this book is sound, conservative, clear and up-to-date, and the large experience and good judgment of the author have evidently dominated it. Its compactness, comprehensiveness and freedom from ambiguity particularly commend it for undergraduate use.

This book will be to the student and practitioner of gynecology what Hirst's has been to obstetrics. H. G. W.

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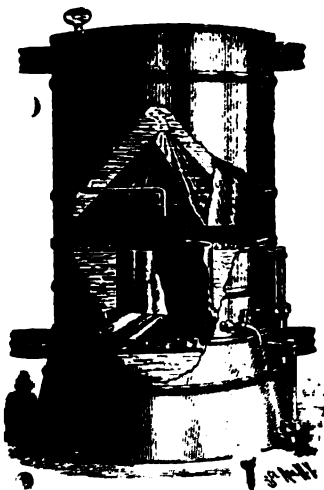
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